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Rocky Flats
Environmental Technology Site

MAN-071-IWCP

REVISION 2

INTEGRATED WORK CONTROL PROGRAM MANUAL

IMC ORGANIZATION: K-H Training and Safety Integration
Title of Organization

Responsible Organization: Training & Safety Integration Effective Date: 3/30/00

APPROVED BY: [signature] / D.P. Harrahy / 3/6/2000
Training & Safety Integration, Print Name, Date
Kaiser-Hill Company, L.L.C.

The Responsible Manager Has Determined the Following Organizations' Review is Required. Review Documentation is Contained in The Document History File:

K-H Safeguards, Security, Site Operations & Integration
K-H Engineering & Nuclear Safety Programs
K-H Environmental Systems and Stewardship
Wackenhut Services, L.L.C.
Safe Sites of Colorado

K-H Closure Projects & Integration
K-H Training & Safety Integration
K-H Nuclear Operations
Rocky Flats Closure Site Services
Rocky Mountain Remediation Services

IMPORTANT NOTES

Periodic review frequency: 3 years from the effective date. Independent Safety Review: SORC 00-04

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DCF-00-002

The following Changes are active for this Manual
DCF-00-002

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CHAPTER 1 - INTEGRATED WORK CONTROL PROGRAM OVERVIEW

1.1 PURPOSE

This Manual establishes requirements and process controls for the Integrated Work Control Program (IWCP) at the Rocky Flats Environmental Technology Site (Site). Activities which pose a threat to the health and safety of the public, the workers, or the environment are planned to have a set of integrated safety and compliance controls through this process.

1.2 SCOPE

The IWCP implements Integrated Safety Management (ISM), as defined in the *Integrated Safety Management System Manual*, and provides detailed guidance on how the five steps of ISM (Figure 1-1) are to be conducted at the Site. The acronym ISM throughout this manual is intended to include environmental requirements in addition to safety. This Manual:

- Identifies the regulatory requirements for work activities (other programs such as Environmental Compliance, Safety & Industrial Hygiene and Nuclear Safety have requirements that must be integrated into the process controls of this Manual, but these are not duplicated in this Manual)
- Provides a summary and guidance for implementing ISM
- Provides a chapter summary for selection of the proper tools depending on the work activity work scope
- Describes methods and controls to identify and screen an activity for the purpose of identifying the proper level of planning
- Describes methods and the controls for the selected planning method to identify the hazards, develop the specific activity controls, and implement the specific activity controls
- Describes methods and the controls to select and use the appropriate vehicle for establishing the work implementing methodology
- Describes methods and the controls for developing operations and technical activity procedures and work plans
- Describes methods and controls to perform preventive maintenance operations, emergency work, and minor maintenance
- Prescribes contingency planning for abandonment or significant delay of a process or activity
- Provides a mechanism for feedback to ensure continuous improvement through the use of a Post Job Review (PJR)

1.3 APPLICABILITY AND USE

This Manual identifies mandatory elements and requirements by using the word "**SHALL**". Any deviations from **SHALL** statements require prior written approval from the Kaiser-Hill (K-H) IWCP Program Manager. Additionally, the Manual uses the word "**Should**" to indicate a recommendation that is based on standards and good business practices. The word "**may**" is used when permission is granted rather than constituted as a recommendation or requirement.

This Manual applies to **all** Site employees and subcontractors performing or supporting onsite work. Additionally this Manual applies to Site employees conducting Site work at offsite locations unless the work is specifically governed by a subcontract. The requirements of this Manual **SHALL** be used for all planning activities begun after the effective date of this Manual.

For those work activities whose planning was completed or initiated prior to the effective date of this Manual, the Responsible Manager (RM) **SHALL** re-screen the activity using the Activity Screening Form – Appendix 2.2 and make any necessary planning changes in accordance with the requirements of this Manual. Additionally, any exceptions to the requirements of this Manual must be granted in writing by the K-H IWCP Program Manager.

1.4 BACKGROUND

The IWCP is the method by which all applicable Site infrastructure programs and requirements, such as health and safety, environmental, engineering, nuclear safety, criticality safety, procurement, radiological, and quality, are integrated into work planning to develop a sound set of safety and compliance controls and these controls are implemented on the job. It provides a single integrated process through which all work on the Site is performed. It ensures that the work is screened consistently to uniform criteria and that hazards are appropriately analyzed and controlled.

The Department of Energy (DOE) requires contractors to integrate environment, safety, and health into work planning and execution. This requirement is implemented through the Department of Energy Acquisition Regulations ISM clause. Either this clause, or an approved Site clause that is substantially the same and meets the intent of Department of Energy Acquisition Regulations clause **SHALL** be in all contracts. This clause states:

"INTEGRATION OF ENVIRONMENT, SAFETY, AND HEALTH INTO WORK PLANNING AND EXECUTION (JUN 1997)

(a) For the purposes of this clause,
  (1) Safety encompasses environment, safety and health, including pollution prevention and waste minimization; and
  (2) Employees include subcontractor employees.

(b) In performing work under this contract, the contractor shall perform work safely, in a manner that ensures adequate protection for employees, the public, and the environment, and shall be accountable for the safe performance of work. The contractor shall exercise a degree of care commensurate with the work and the associated hazards. The contractor shall ensure that management of environment, safety and health (ES&H) functions and activities becomes an integral but visible part of the contractor's work planning and execution processes. The contractor shall, in the performance of work, ensure that:
  (1) Line management is responsible for the protection of employees, the public, and the environment. Line management includes those contractor and subcontractor employees managing or supervising employees performing work.
  (2) Clear and unambiguous lines of authority and responsibility for ensuring ES&H are established and maintained at all organizational levels.
  (3) Personnel possess the experience, knowledge, skills, and abilities that are necessary to discharge their responsibilities.
  (4) Resources are effectively allocated to address ES&H, programmatic, and operational considerations. Protecting employees, the public, and the environment is a priority whenever activities are planned and performed.
  (5) Before work is performed, the associated hazards are evaluated and an agreed-upon set of ES&H standards and requirements {i.e., safety controls} are established which, if properly implemented, provide

adequate assurance that employees, the public, and the environment are protected from adverse consequences.

(6) Administrative and engineering controls to prevent and mitigate hazards are tailored to the work being performed and associated hazards. Emphasis should be on designing the work and/or controls to reduce or eliminate the hazards and to prevent accidents and unplanned releases and exposures.

(7) The conditions and requirements to be satisfied for operations to be initiated and conducted are established and agreed-upon by DOE and the contractor. These agreed-upon conditions and requirements are requirements of the contract and binding upon the contractor. The extent of documentation and level of authority for agreement shall be tailored to the complexity and hazards associated with the work and shall be established in a Safety Management System.

(c) The contractor shall manage and perform work in accordance with a documented Safety Management System that fulfills all conditions in paragraph (b) of this clause at a minimum. Documentation of the System shall describe how the contractor will:

(1) Define the scope of work;
(2) Identify and analyze hazards associated with the work;
(3) Develop and implement hazard controls;
(4) Perform work within controls; and
(5) Provide feedback on adequacy of controls and continue to improve safety management."

Therefore in this Manual ISM refers to environment, safety & health. Figure 1-1 pictorially demonstrates the relationship between ISM and IWCP.

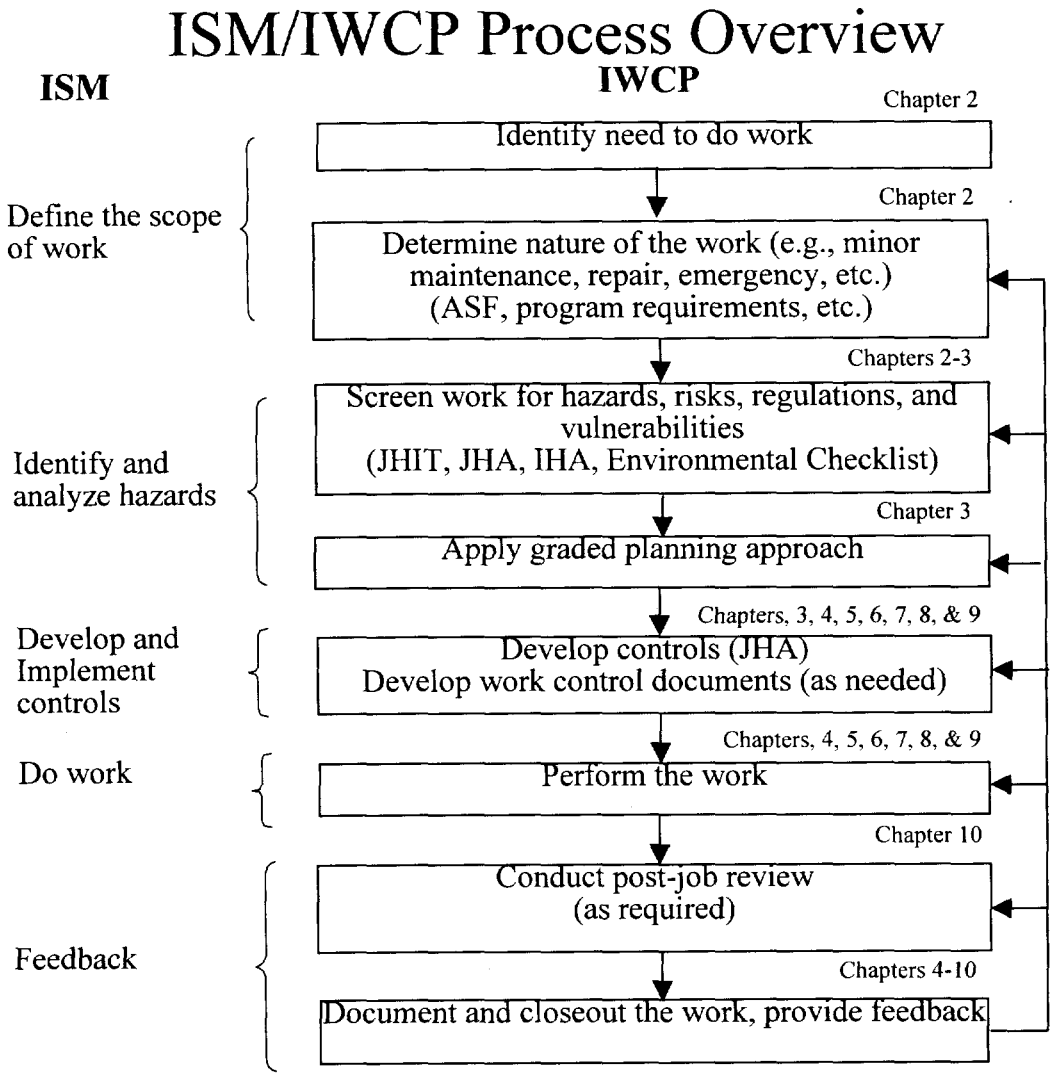
1.5 CHAPTER SUMMARY

This section provides a synopsis of the uses for each of the succeeding chapters. This Manual is written to be followed sequentially from Chapters 1-3 for most work activities, but it is not intended to be a sequential flow document starting at Chapter 4 and proceeding through the Manual. Users **SHALL** refer to Appendix 1.1, "Flow Charts," as well as the instructions contained in this Manual for the overall Site work processes. Appendix 1.2, "Requirements," provides a list of the external standards and requirements that drive the IWCP. Appendix 1.3, "Training Guidelines," provides the guidelines for training, and provides a perspective of how training fits into the overall ISM system and IWCP processes. Organizations in this Manual are identified generically (i.e., Environmental, Safety & Health, etc.) so that the function can be performed by either the K-H or subcontractor organization, as appropriate. See Appendix 1.1 for an overview of the IWCP process.

Each work activity under the control of this Manual involves differing circumstances where a chapter can be used first in one instance, and a different chapter used first in another. The overview provided by this chapter is intended to:

- Provide the user with a general understanding of all the chapters
- Show how Site work is implemented from identification of a work activity to work closeout
- Provide an overview to show that all ISM requirements have been addressed

Figure 1-1



1.5.1 Chapter 2 – Work Initiation and Screening

Chapter 2 provides the instructions for identifying an activity via a Work Control Form (WCF). The WCF **may** be initiated by any employee identifying a deficiency or need for the performance of work. Also provides the criteria and instructions for completing the Activity Screening Form (ASF). The ASF is used by the RM to categorize work activities according to their hazards (low, medium, high, or passes the prescreen) and identifies the required organizations that need to be involved in the planning process. The ASF is also performed a "second" time as one of the last steps in scheduling work for performance, at which point the Work Control Document (WCD) will normally pass the prescreen.

1.5.2 Chapter 3 – Work Planning & Hazard Analysis Process

Chapter 3 provides the instructions for conducting the three levels of work planning, as determined by the ASF. Chapter 3 also provides the instructions for completing a JHIT and a Job Hazard Analysis (JHA) which are required for all three levels of work planning. The instructions and guidelines for conducting a more detailed Integrated Hazards Assessment (IHA) for more highly complex or hazardous activities is also contained in Chapter 3. This Chapter is the only approved process for conducting work related job hazards analyses.

1.5.3 Chapter 4 - Work Package Process

Chapter 4 provides the criteria and instructions for conducting work via the Type 1 and Type 2 Work Packages (WP) including format and approval requirements, conduct of work, change control, and close-out. A Type 1 WP is generally used for activities where engineering design is not required, while a Type 2 WP contains input from an approved engineering design package.

1.5.4 Chapter 5 – Standard Work Package Process

Chapter 5 provides the criteria and instructions for developing and using Standard Work Packages (SWP). These are WPs that are used on a repeating basis and may include troubleshoot and repair (TS&R) activities.

1.5.5 Chapter 6 – Work Plans and Procedures

Chapter 6 provides the criteria and instructions for conducting work via Work Plans and Procedures (WP&Ps) including formatting and approval requirements, conduct of work, change control, and closeout. This Chapter contains a table to help determine additional governing documents, permits or agency agreements required for the development of the WP&Ps. A significant amount of work is accomplished on Site which does not require the use of a traditional WP. Therefore this Chapter is used as a means to capture those processes and activities which do not require the use of a WP, thereby ensuring they follow the requirements of the IWCP to ensure the functions and elements of ISM are incorporated.

1.5.6 Chapter 7 - Preventive Maintenance Process

Chapter 7 provides the criteria and instructions for the development and control of Preventive Maintenance activities including formatting and approval requirements, conduct of work, change control, and closeout.

1.5.7 Chapter 8 - Minor Maintenance Process

Chapter 8 provides the criteria and instructions for conducting minor maintenance activities. This chapter also includes a pre-approved JHA matrix for all minor maintenance tasks to allow for work implementation consistent with this Manual's requirements with minimal paperwork. This Chapter is also considered the work document, so no other work document is required.

1.5.8 Chapter 9 - Emergency Work Process

Chapter 9 provides the criteria and instructions for performing and documenting emergency work. This chapter uses an Emergency Action Work Log (EAWL) which provides a standardized format for documenting emergency work. Emergency work is the only work activity which bypasses the ASF. This Chapter identifies hazards and develops controls appropriate for the urgent nature of this work.

1.5.9 Chapter 10 - Post Job Review Process

Chapter 10 provides guidance for performing PJRs, along with the criteria to determine when a PJR is required. The fifth element of ISM is feedback, which improves work by providing a means to identify, communicate, and suggest document and work performance improvements. A significant amount of very effective informal feedback occurs throughout the work planning and execution process. This Chapter includes methods for workers to provide formal feedback to help identify strengths and weaknesses in order to improve work control processes.

1.5.10 Chapter 11 – References

Chapter 11 provides a list of references used throughout the Manual.

1.6 DEFINITIONS

This is a list of terms and definitions used throughout the Manual. If a definition is not included, the definitions in the RFP Dictionary apply.

Activity. A defined scope of work for designation of controls to maintain an adequate margin of safety against the hazards or other uncertainty presented by the work.

Administrative Controls. See 1-MAN-018-NSM, Nuclear Safety Manual.

Administrative Request. A request for administrative support of maintenance, e.g., SWP, Preventive Maintenance Work Package (PMWP).

Authorization. The granting of approval to operate a facility or process in accordance with the terms and conditions of a set of authorization controls. A regulator or legal authority provides authorization.

Basis. Summary statement of the reason for the administrative and engineered controls, the administrative control program and the associated surveillance requirements. The Basis relates the credited assumptions made in the accident analysis to the requirements for safe operation.

Basis for Interim Operation. A nuclear facility safety basis document that establishes the interim safety basis for a facility by summarizing and referencing existing information and, where necessary, by generating new information [DOE-STD-3011-94].

Basis for Operation. A nuclear facility safety basis document that establishes the safety basis for a facility through use of the necessary and sufficient process for evaluation of hazards and development of nuclear safety controls.

Bill of Material. Form that contains a technical description for items performing maintenance or modification work.

Caution Statement. A statement to alert the user to possible equipment damage. The caution precedes the step or steps to which it applies. Cautions do not contain action steps. For emphasis, the caution is enclosed in a box and labeled **CAUTION**.

Compliance Control. A physical or administrative control to ensure compliance with environmental regulations, safeguards and security requirements, DOE Orders, and other requirements that do not directly impact worker or public safety.

Comprehensive Environmental Response, Compensation and Liability Act. CERCLA was enacted by Congress in 1980 to respond to situations involving the past disposal of hazardous substances.

Construction. For purposes of this document, the term referring to Decontamination and Decommissioning (D&D), new or modified construction, and remediation work performed on Site.

Contractor's Technical Representative. See APR-111, Acquisition Procedure for Requisitioning Commodities and Services.

Corrective Maintenance. The repair or rework of failed or malfunctioning equipment, system, or facilities to restore the intended function or design condition. This maintenance does not result in a significant extension of the expected useful life. (DOE 4330.4B, Attachment 1)

Davis-Bacon Covered Work. Work that is covered under the provisions of the Davis-Bacon Act, and is considered to be construction type work and cannot be assigned to contractor or subcontractor's maintenance forces.

Decontamination and Decommissioning. Encompasses an overall process from planning to demolition and cleanup - includes deactivation, decommissioning, dismantlement, and demolition.

Design Basis. See 1-MAN-018-NSM, Nuclear Safety Manual.

Design Intent. Purpose for which a plan of execution for construction, maintenance, modification, or repair activities were formulated (i.e., fire protection, ventilation supply, heating, etc.).

Design Performance Criteria. See 1-W51-COEM-DES-210, Site Engineering Process Procedure.

EM/Preventive Maintenance (PM) Administrator. The individual assigned to oversee the Maintenance Management System.

Environmental Degradation. Conditions adverse to the safety of the environment that can impact personnel and public safety within and outside of the Site's boundaries.

Equivalent Item. A part or component that is an equivalent to the item being replaced as established by the performance of an Item Equivalency Determination.

Facility. Any equipment, structure, system, process, or activity that fulfills a specific purpose. The definition of facility most often refers to buildings and other structures, their functional systems and equipment, and other fixed systems and equipment installed therein to delineate a facility. However, specific operations and processes independent of buildings or other structures (e.g., waste retrieval and processing, waste burial, remediation, groundwater or soil decontamination, decommissioning) are also encompassed by this definition. For the purpose of this procedure, the facility designation is expanded to include any formally designated building, site, structure, area, or project (such as Building 371, Pads, Tents, or Ponds) where a formal work authorization must be granted prior to conducting work.

Graded Approach. A process by which the level of analysis, documentation, and actions necessary to comply with a requirement are commensurate with:

- Relative importance to safety, environment, safeguards, and security
- Magnitude of any hazard involved
- Life-cycle stage of the facility or activity
- Programmatic mission of the facility or activity
- Particular characteristics of the facility or activity
- Other relevant factors, as appropriate

Hazard. A source of danger (i.e., material, energy source or operation) with the potential to cause illness, injury, or death to personnel or damage to a facility or to the environment (without regard for the likelihood or credibility of accident scenarios or consequence mitigation).

Hazard Analysis. The determination of material, system, process, and facility characteristics that can produce undesirable consequences, followed by the assessment of hazardous situations associated with a process or activity leading to the development of safety controls. Largely qualitative techniques are used to pinpoint weaknesses in design or operation of the facility that could lead to accidents (e.g., JHA, ALARA Review).

Hazard Categories. See 1-MAN-018-NSM, Nuclear Safety Manual.

Hazardous Material. Any solid, liquid, or gaseous material that is toxic, explosive, flammable, corrosive, or otherwise physically or biologically threatening to health. Oil is excluded from this definition. Solid, liquid, or gaseous substances in quantities that either alone, when combined with another substance through a credible mechanism, or when coming in contact with an available energy source, are determined to be capable of posing an unacceptable risk to the environment or to the health and safety of the workers or the public. This includes radiological, non-radiological and mixed materials that are toxic, explosive, flammable, corrosive, or otherwise physically or biologically health threatening.

Health and Safety Plan. A written document prepared by the subcontractor that includes the subcontractor's proposal for implementing Site construction health and safety requirements, identification of subcontractor supervisor personnel, competent persons and qualifications responsible for health and safety performance, and proposed construction site health and safety orientation.

Hold Point. A step in the work package where work is not allowed to proceed until the step is complete and signed, e.g., inspection point, verification point.

Inspection. Examination or measurement of an activity to verify conformance to specific requirements.

Integrated Safety Management. ISM is the systematic integration of safety into management and work practices at all levels so that missions are accomplished while protecting the public, the worker, and the environment. This is to be accomplished through effective integration of environment, safety and health into work planning and execution resulting in a set of integrated safety and compliance controls for the work.

Integrated Work Control Program. The primary mechanism for institutionalizing ISM into the work planning, management, and control processes and is used to control all work conducted at the Site. It ensures that work is screened and planned consistently to uniform criteria and that hazards are appropriately analyzed and controls identified and implemented.

Job Hazard Analysis. A documented process whereby the steps for a work activity are analyzed for a set of safety controls defined prior to the work being performed.

Job Hazard Identification Tool. A checklist used by a planning team to assist in identifying potential hazards associated with a work activity, and to identify additional subject matter expertise required to be involved in analyzing hazards and recommending associated controls.

Like for Like. A part or component which is the same as the part being replaced.

Line Management. Line Management includes those contractor and subcontractor employees responsible for planning, managing, or supervising employees performing work.

Maintenance Management System. A Sitewide computerized system for the tracking of Preventive Maintenance which contains the equipment, plan, work order, and history information for specific components.

Modification. Any change, addition, or alteration to a system, structure or component that alters the design basis (e.g. flow rates, seismic strengths, delta pressures, control parameters, program sequence, load carrying capacity, response time, fire suppression/detection capabilities, shielding, criticality spacing, corrosion resistance). Use of like for like or equivalent item is not a modification.

Nonconformance Report. A report used to document the identification, disposition, and correction of nonconforming items or activities.

Notes. A statement that provides important supplemental information. Notes can pertain to action steps. When associated with action steps, the note precedes the step or steps to which it applies. Notes do not contain action steps.

Nuclear Activity. See 1-MAN-018-NSM, Nuclear Safety Manual.

Nuclear Facility. See 1-MAN-018-NSM, Nuclear Safety Manual.

Nuclear Facility Authorization Basis (AB). Those aspects of the hazard category 2 and 3 nuclear facility design basis and operational requirements relied upon by DOE to authorize operation. These aspects are considered to important to the safety of the facility operations. The AB is described in documents such as the facility Safety Analysis Report and other safety analyses, hazard classification documents and the TSRs, DOE-issued safety evaluation reports, and facility-specific commitments made in order to comply with DOE rules, Orders, or policies.

Operational. The terminology used for a system or component that is capable of performing its intended function in the required manner upon demand.

Operational Safety Requirement. See 1-MAN-018-NSM, Nuclear Safety Manual.

Out of Service. The terminology used for equipment, components, and systems that are not available for operation for any given reason, and are intended to be returned to service.

Planning Team. The multi-disciplined team assigned the responsibility of planning the work for both the Medium and High Planning Levels. This Team can include engineers, planners, managers, crafts, SMEs and safety and health professionals.

PM Coordinator. The individual/individuals assigned by the company to administrate that company's preventive maintenance program.

Post-maintenance Testing. Action taken to verify that equipment or components are operating correctly and fulfilling their design functions when returned to service following the completion of work.

Preventive Maintenance. Includes periodic and planned maintenance actions taken to maintain a piece of equipment within design operating conditions and extend its life and is performed prior to equipment failure or to prevent equipment failure. This includes technical specifications surveillance, in-service inspections, and other regulatory forms of preventive maintenance.

Project Management Plan / Project Execution Plan. These are used synonymously throughout this Manual. They define the project charter, work plan, and requirements implementation. The charter includes the project vision, mission and critical success factors. The work plan includes the work breakdown structure (WBS), responsibility assignment, scope of work, estimated schedule, estimated cost for the project, and project controls.

Project Team. Participants on a project including the Program Manager, Project Manager, Project Engineer, Building/User Representatives, Contractor Representative, Construction Engineer, appropriate subject matter expert(s), and other personnel assigned to the project.

Public. All individuals outside the DOE Site boundary.

Quality Assurance Plan. A formal document describing necessary quality assurance, quality control, and other technical activities that are implemented to ensure that the results of the work performed will satisfy the stated performance criteria.

Quality Record. A document that furnishes objective evidence of the quality of items or activities and that has been verified and authenticated as technically complete and correct. Records may include photographs, drawings, magnetic tape, and other data recording media.

Remedial Investigation/Feasibility Study. The remedial investigation is the process to determine the nature and extent of the problem presented by a release. The feasibility study to develop and evaluate options for remedial action. The RI emphasizes data collection and site characterization while the FS emphasizes data analysis.

Remediation. Activities conducted to reduce potential risks to people and/or harm to the environment from radioactive and/or hazardous substance contamination.

Repair. The process of restoring a nonconforming characteristic to a condition such that the capability of an item to function reliably and safely is unimpaired, even though that item still does not conform to the original requirement.

Responsible Manager (RM). The manager directly responsible and accountable for the development, implementation, and performance of the work (e.g., Facility Manager, Building Manager, Operations Manager, Maintenance Manager, Engineering Manager, and/or Project Manager).

Responsible Organization. The organization that is assigned to have the primary or lead responsibility for the resolution of a deficiency or completion of a required action on a Work Request or Administrative Request. The Responsible Organization can be any site organization, including that of the originating RM.

Rework. The process by which an item is made to conform to the original requirements by completion or correction.

Safety Analysis Report. See 1-MAN-018-NSM, Nuclear Safety Manual.

Safety Basis. See 1-MAN-018-NSM, Nuclear Safety Manual.

Safety-Class Structures, Systems, and Components. See 1-MAN-018-NSM, Nuclear Safety Manual.

Safety Control. A functional capability or performance level of a structure, system, component, or administrative system required to:

1. Prevent the interaction of a hazard with the public, worker, or the environment, or
2. Mitigate the consequences of the interaction of a hazard with the public, worker, or the environment.

Safety Equipment. A piece of equipment, personal protective equipment (PPE), system, etc. that controls hazards to an acceptable level of risk so that if used properly, there is a "practical certainty" that no harm will result to exposed workers, the public, or the environment. This

includes engineered hazard controls, etc. but does not include administrative or procedural controls. For nuclear facilities, this definition includes the definition of safety-class and safety-significant structures, systems, and components as defined by the Nuclear Safety Manual.

Safety Management Programs. The safety management programs comprise the safety infrastructure at the Site, and address three major areas: (1) appropriate control of radiological and hazardous material hazards, (2) regulatory compliance, and (3) good engineering and management practices.

Safety-Significant Structures, Systems, and Components. See 1-MAN-018-NSM, Nuclear Safety Manual.

Scope. Statement specifying the performance boundaries of the work activity to be executed (e.g., remove/install piping, run conduit, install fire control panel).

Scope of Work. Refers to the project or activity baseline that defines technical objectives and general approaches in terms of design, execution, and performance requirements, criteria, and characteristics derived from what the project is intended to accomplish.

Site. An area of land that contains a DOE facility or facilities or is either owned or leased by DOE or the Federal government. A DOE Site and facility may or may not have the same boundaries. The general public may or may not have access. When capitalized, i.e., Site, the word is used as an acronym for the Rocky Flats Environmental Technology Site.

Skill-of-the-Craft. Those skills that a craftsman/technician should be able to perform commensurate with his/her skill training without specific task instructions (i.e., instruct craft to install hot water heater element without providing detailed instructions).

Source Document. Documents or references that support, initiate, or cross-reference the Work Control Form. These documents **may** include:

- Requirement documents (such as DOE orders, Engineering specifications, or administrative or technical procedures)
- Deficiency corrective action documents (such as audits, self-assessments, Non-Conformance Reports, safety concerns, or Occurrence Report actions)

Specification. See 1-W51-COEM-DES-210, Site Engineering Process Procedure.

Standard Work Package. A pre-approved WP prepared for a repetitive maintenance action and authorized to be used on a recurring basis with RM or Shift Manager (SM) approval.

Statement of Work. Describes the essential and technical requirements for items, materials, or services to be provided.

Technical Procedure. See PRO-815-DM-01, Developing, Maintaining and Controlling Documents.

Training. Initial and continuing training programs implemented to ensure that personnel are qualified to the performance requirements of the job.

Unreviewed Safety Question. See 1-MAN-018-NSM, Nuclear Safety Manual.

Unreviewed Safety Question Determination. See 1-MAN-018-NSM, Nuclear Safety Manual.

Verification Point. A step in the work package that ensures a condition conforms to the specified requirements and the process cannot proceed without first completing this step. (i.e. verification of Lockout/Tagout (LO/TO)).

Warning Statement. A statement to alert the user to possible personal injury or environmental damage. The warning precedes the step or steps to which it applies. Warnings do not contain action steps. For emphasis, a warning is enclosed in a box and labeled **WARNING**.

WCF Database. A sitewide computerized system for tracking the status of a Work Request or Administrative Request initiated on the WCF (also see Maintenance Management System).

Witness Point. A step in the work package that requires someone other than the person performing the task to actually watch the task take place.

Work. Any physical project or effort that has the potential to produce damage to the environment, injury to the public or worker in the event of an accident or process upset.

Work Authorization Process. The planning and preparation for the conduct of an activity, which result in a documented safety basis and a verifiable ready to proceed status.

Work Control Documents. Those documents that are used directly to perform tasks in preparation for or in the performance of an activity, such as IWCP work packages, technical procedures, and Preventive Maintenance Work Orders.

Work Control Form. The form utilized to initiate, process, and assign a Work Request or Administrative Request to the Responsible Organization.

Work Control Number. The unique computer-generated number, or authorization charge number, obtained from the Work Control Database and assigned to a specific WCF for purposes of tracking work governed by the IWCP.

Work Request. A request for new construction, modifications, or improvements to equipment, facilities, or plant grounds.

Worker. Persons working in the immediate area of concern within the process safety management control of a given facility or activity. For the purposes of this document, the term "workers" is meant to be all inclusive, and includes all workers such as the facility workers, co-located workers, contractors, subcontractor employees, and visitors.

1.7 ACRONYMS

AB	Authorization Basis
ALARA	As Low As Reasonably Achievable
ANSI	American National Standards Institute
ASF	Activity Screening Form
BOM	Bill of Material
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
COOP	Conduct of Operations
CRIT	Criticality Engineering
D/B	Davis Bacon
D&D	Decommissioning & Decontamination
DOE	Department of Energy
EAWL	Emergency Action Work Log
EDP	Engineering Design Package

EM/PM	Equipment Maintenance/Preventive Maintenance
ENG	Engineering
ES&H	Environmental, Safety & Health
FD	Fire Department
FI	Facilities Inspection
FP	Fire Protection
FSAR	Final Safety Analysis Report
FSC	Firearms Safety Committee
H&S	Health and Safety
H&SP	Health and Safety Practice Manual
HEPA	High Efficiency Particulate Air filter
HVAC	Heating, Ventilation, and Air Conditioning
IH	Industrial Hygiene
IHA	Integrated Hazards Assessment
ISM	Integrated Safety Management
IWCP	Integrated Work Control Program
JHA	Job Hazards Analysis
JHIT	Job Hazard Identification Tool
K-H	Kaiser Hill Company, LLC
LL/GI	Lessons Learned/Generic Implications
LL/LLM	Low level waste/low level mixed waste
LO/TO	Lockout/Tagout
LS/DW	Life Safety Disaster Warning System
MAORF	Master Agreement Order Receiving Form
MSDS	Material Safety Data Sheet
N/A	Not Applicable
NS	Nuclear Safety Engineering
ORC	Operations Review Committee
OS&IH	Occupational Safety & Industrial Hygiene
OSHA	Occupational Safety & Health Administration
OSR	Operational Safety Requirement
PCB	Polychlorinated Biphenyl
PJR	Post Job Review
PL	Procurement Level
PM	Preventive Maintenance
PMCR	Preventive Maintenance Change Request
PMT	Post Maintenance Test
PMWP	Preventive Maintenance Work Package
PPE	Personal Protective Equipment
PRC	Plant Review Committee
QA	Quality Assurance
RAD	Radiological Operations/Engineering
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Cleanup Agreement
RFETS	Rocky Flats Environmental Technology Site (the Site)
RM	Responsible Manager
S&S	Safeguards & Security
SAR	Safety Analysis Report
SES	Safety Evaluation Screen
Site	Rocky Flats Environmental Technology Site
SM	Shift Manager
SME	Subject Matter Expert
SWP	Standard Work Package
TRU/TRM	Transuranic Waste/Transuranic Mixed Waste
TS&R	Troubleshoot & Repair

TSR	Technical Safety Requirement
USQD	Unreviewed Safety Question Determination
WBS	Work Breakdown Structure
WCD	Work Control Document
WCF	Work Control Form
WIPP	Waste Isolation Pilot Plant
WP	Work Package
WP&P	Work Plans & Procedures
WSLLC	Wackenhut Services, L.L.C.

1.8 GENERAL RESPONSIBILITIES

General responsibilities with respect to the IWCP are given below. Specific responsibilities are provided in individual chapters.

1.8.1 Senior Line Management

Ensure that line managers under their responsibility are trained and require that they use this Manual for all work in their area of responsibility.

Senior line management **SHALL** maintain a list of designated RMs for each facility. The RMs **SHALL** have training in the use of the IWCP and WCD development, and **Should** be familiar with the general principles and practices of project management. This requirement **SHALL** be fully implemented 3 months from the effective date of this Manual.

Conduct oversight activities to ensure IWCP is safely and effectively implemented.

1.8.2 Responsible Manager

The RM is the manager directly responsible and accountable for the development, implementation, and performance of the work (e.g., Facility Manager, Building Manager, Operations Manager, Maintenance Manager, and/or Project Manager). The RM **SHALL** be on the facility list of designated RMs.

Use this Manual for planning and performance of all work under their responsibility and ensure the requirements for this Manual are met.

Ensure that support staff and subordinate managers, supervisors and workers implement the results of the screens and safety and compliance controls developed using this Manual.

Ensure that teams, when required, are made up of the properly qualified safety and environmental personnel, craftsmen, engineers and subject matter experts (SMEs).

1.8.3 Project Managers, Planners, Engineers and Support Staff

Implement the decisions made, and safety and compliance controls developed, by the use of this Manual in the execution of planning, analysis, procedure writing, work package generation, and development of drawings and specifications.

1.8.4 Safety & Program Subject Matter Experts and Floor-Level Workers

Provide input into the work document planning and development process to produce a WCD that implements the elements of ISM and this Manual with an emphasis on safety, while also ensuring workability and efficiency.

1.8.5 Environmental Compliance and Stewardship Subject Matter Experts and Floor Level Workers

Provide input into the work document planning and development process to produce a WCD that implements the elements of integrated environmental management and this Manual with an emphasis on compliance and stewardship opportunities, while also ensuring workability and efficiency. Ensure compliance with Federal, State, and DOE requirements in the management of all work.

1.8.6 All Employees

Identify and report deficiencies and opportunities for improvement as a routine element of their normal activities.

1.9 RECORDS

The following documents are initiated, processed or maintained as a result of this Manual and **SHALL** be processed as follows:

Record Identification	Record Type Determination	Protection/Storage Methods	Processing Instructions
Work Documents (consisting of the following documents as specified in the IWCP instructions). a) ASF b) Site SAR Screening Form c) WCF d) JHIT e) JHA f) Environmental Checklist and/or Evaluation g) Type 1 WPs h) Type 2 WPs i) Technical Procedures, Technical Operations Orders, Performance Test and Exercise Plans and other Chapter 6 work control documents j) Preventive Maintenance WPs k) Emergency Work Packages l) Minor Maintenance Documentation m) Procurement Specifications (non design) n) Inspection Requirements	***In-Process WIPP/LL/LLM QQA Documents:*** When document(s) is being generated by the Transuranic (TRU) and LL programs, not yet complete (authenticated). ***In-Process QA Document(s):*** Document(s) is being generated and is not yet applicable to the TRU/LL programs. ***WIPP/LL/LLM QA Record:*** As per 1-V41-RM-001, Appendix 10; if the document(s) is related to the WIPP Project and it is complete (authenticated).	***In-Process WIPP/LL/LLM QA Documents:*** While being generated, the RM **SHALL** implement a reasonable level of protection to prevent loss and/or degradation. Document(s) **SHALL** be processed using standard office filing equipment and methods when not in use. ***In-Process QA Document(s):*** While being generated, the RM **SHALL** implement a reasonable level of protection to prevent loss and/or degradation. Document(s) **SHALL** be processed using standard office filing equipment and methods when not in use. ***WIPP/LL/LLM QA Record:*** **SHALL** be transmitted to the Waste Records Center, within one (1) working day of completion. During this period, RMs **SHALL** continue to implement a reasonable level of protection to prevent loss and/or degradation. Document(s) **SHALL** be stored in standard office filing equipment.	***In-Process WIPP/LL/LLM QA Documents:*** Continue prescribed processing of document(s). RMs **SHALL** implement a reasonable level of protection to prevent loss and/or degradation. Document(s) **SHALL** be stored in standard office filing cabinets until complete. ***In-Process QA Document(s):*** Continue prescribed processing of document(s). RMs **SHALL** implement a reasonable level of protection to prevent loss and/or degradation. Document(s) **SHALL** be stored in standard office filing cabinets until complete. ***WIPP/LL/LLM QA Record:*** Transmit document(s) to the Waste Records Center, per 1-PRO-077-WIPP-005.
	QA Record: Record that is considered complete (authenticated), as per 1-V41-RM-001, Appendix 10.	***QA Record:*** RMs **SHALL** implement a reasonable level of protection to prevent loss and/or degradation. Document(s) **SHALL** be stored in standard office filing equipment.	***QA Record:*** When inactive (as defined in 1-V41-RM-001), transfer to Site Records Management in accordance with 1-V41-RM-001.

APPENDIX 1.1 - FLOW CHARTS AND OVERVIEW

INTEGRATED WORK CONTROL PROGRAM (IWCP) OVERVIEW

THIS OVERVIEW IS DESIGNED TO BE A GUIDE THROUGH THE IWCP PROCESS AND REMIND USERS OF KEY POINTS. THE USER MUST REFER TO THE FOLLOWING CHAPTERS TO PLAN WORK AND DEVELOP WORK CONTROL DOCUMENTS!

The DOE Integrated Safety Management (ISM) system is an integrated approach to environment, safety, and health to ensure that work is planned, analyzed, reviewed, approved, and executed in a safe manner and that the process is continuously improved. The Rocky Flats Integrated Work Control Program (IWCP) Manual contains the ISM core function guidance necessary to: Define the Scope of Work; Identify and Analyze the Hazards; Identify and Implement Controls; Perform the Work Safely; and Provide Feedback through out the process. The IWCP Manual also contains appropriate reference to other Site infrastructure programs to ensure work is planned and conducted in accordance with the requirements of those programs. This overview provides a quick discussion regarding the key elements of IWCP. Additional IWCP training may be obtained via the KH Training department and includes the following courses: IWCP Work Package Development; IWCP/JHA Workshop; Job Hazards Analysis (JHA) CBT and the IWCP Overview self study web page.

⇒ IWCP applies to **ALL** Site employees and subcontractors performing or supporting onsite work.

⇒ No work performed at the Site is exempt from the requirements of the IWCP without first being screened.

⇒ Any exceptions to the requirements of the IWCP must be granted in writing by the IWCP Program Manager.

⇒ The Responsible Manager is directly responsible and accountable for the development, implementation, and performance of the work (e.g., Facility Manager, Building Manager, Operations Manager, Maintenance Manager, Responsible Engineering Manager, and/or Project Manager).

DEFINITIONS:

"**SHALL**" - Mandatory element and requirement.

"**Should**" - A recommendation that is based on standards and good business practices.

"**may**" - Permission is granted rather than constituted as a recommendation or requirement.

"**work**" - Any physical project or effort that has the potential to produce damage to the environment, injury to the public or worker in the event of an accident or process upset

IWCP/ISM PROCESS OVERVIEW: - IWCP and ISM work hand-in-hand

- In general, Chapters 1-3 of the IWCP Manual apply to all work activities. These contain information regarding scope definition, hazard identification, hazard controls and include the WCF, ASF and JHIT/JHA.
- The ASF is completed by the RM and determines the planning level for the activity and the composition of the planning team.
- Then the Job Hazard Identification Tool (JHIT) and Job Hazard Analysis (JHA) are developed by the planning team to identify hazards and controls.
- After the planning level and work control document (WCD) type are determined, go to the applicable chapter for development of the WCD. Review Lessons Learned for applicable lessons prior to WCD development.
- For more detail refer to Appendix 1.1, "Flow Charts," as well as the IWCP instructions for the overall Site work processes .
- For emergency work go immediately to Chapter 9.
- Chapter 1 contains definitions and acronyms.

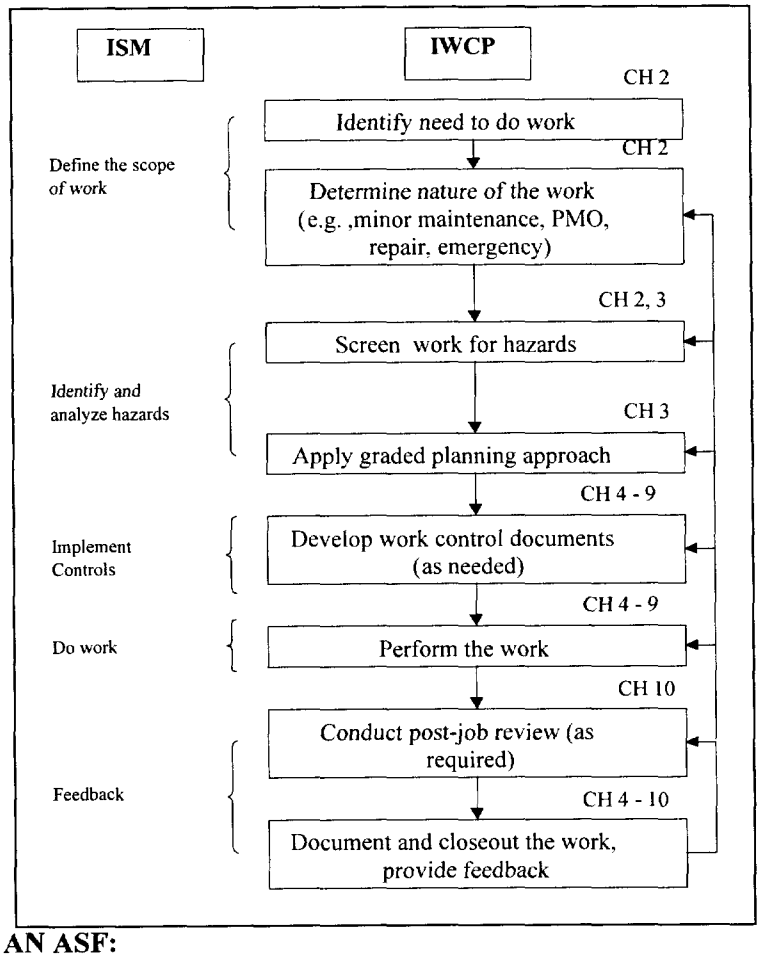
APPENDIX 1.1 – FLOW CHARTS & OVERVIEW

WORK INITIATION/ACTIVITY SCREENING FORM:

If the work involves maintenance, initiate a WCF; otherwise, generate an ASF. A WCF acts like a traveler attached to a WCD, summarizing data, determinations, choices and status. The form is filled out sequentially from origination through closure, ensuring the IWCP is followed. For non-maintenance activities the ASF evaluates the activity to determine if: 1) adequate control/documentation is in place to perform the work, and/or 2) the required expertise and planning level is in place to adequately plan the work in a safe and compliant manner based on potential hazards and programmatic requirements. [Chapter 2]

The ASF **SHALL** be performed for the following:

- For new projects and activities
- Whenever the hazards, processes, equipment, or controls have changed since the last time it was performed, or for which the WCDs require development or revision (includes procedures, work packages, preventive maintenance packages, service contracts, etc.)
- Prior to commencing work



CLASSIFYING THE SCORING RESULTS OF AN ASF:

Low planning level approach (15 points or less) – activity hazards and complexity are low and the work is either routine or simple and there is some experience at performing most, if not all, of the work. Examples could include maintenance and replacement of equipment.

Medium planning level approach (16-40 points) – usually applied when there are some significant hazards associated with the work or some uncertainty exists about the hazards. The activity is somewhat complex, or the activity has not been performed by the associated project team at the Site. Planning team will consist of a planner and all the SMEs identified in the ASF. Examples could include most D&D work and environmental restoration.

High planning level approach (41 points or greater) – usually applied when there are significant hazards associated with the activity (or significant uncertainty exists about the hazards), and there is significant activity complexity or the activity has not been performed by the associated project team at the Site. Planning team will consist of a planner and all the SMEs identified in the ASF. An example could be installation of the PuSPS.

HAZARD IDENTIFICATION AND CONTROL:

The JHIT helps the planners and workers focus on the hazards associated with performing the work activity. The planning team identifies the potential hazards as part of a job walkdown, establishes the required controls to prevent/mitigate the hazards, documents the hazards and controls on the JHA, and incorporates the controls in the WCD. The JHA Guide assists the team in determining controls, requirements, and training. Performing a JHA is a repetitive process and **Should** be re-visited and updated as needed during the planning phase and/or execution phase if new hazards are discovered, or if the scope or safety and compliance controls change. [Chapter 3]

APPENDIX 1.1 – FLOW CHARTS & OVERVIEW

WORK CONTROL DOCUMENTS

Type 1 WP	Provides the criteria/instructions for conducting work including format and approval requirements, conduct of work, change control, and close-out. Type 1 is generally used for maintenance activities where engineering design is not required. Engineering calculations and input may be used and documented in a Type 1 WP. [Chapter 4]
Type 2 WP	Provides the criteria/instructions for conducting activities where engineering design support is necessary. This process coordinates the actions of the design engineer with the planner and follows the same format and requirements as a Type 1 WP. [Chapter 4]
Standard WP	Provides the criteria/instructions for conducting work that is repetitive in nature. [Chapter 5]
Work Plans Procedures	Provides the criteria and instructions for conducting work using Work Plans and & Procedures (such as: Technical Procedures, Technical Operations Orders, etc.) including formatting and approval requirements, conduct of work, change control, and closeout. Provides a table to help determine additional governing documents required for development of the WP&Ps. [Chapter 6]
Preventive Maintenance WP	Provides the criteria and instructions for the development and control of Preventive Maintenance activities including formatting and approval requirements, conduct of work, change control, and closeout. [Chapter 7]
Minor Maintenance	Provides the criteria and instructions for conducting minor maintenance activities. Includes a pre-approved JHA matrix to allow for implementation of ISM while conducting work with minimal paperwork. [Chapter 8]
Emergencies	Provides, along with the Conduct of Operations Program (COOP), the criteria and instructions for performing and documenting emergency work, which is work that requires immediate action to prevent serious personal injury, harm to the environment, a breach to security, or a serious loss of property. Emergency work is the only work activity which bypasses the ASF. [Chapter 9]

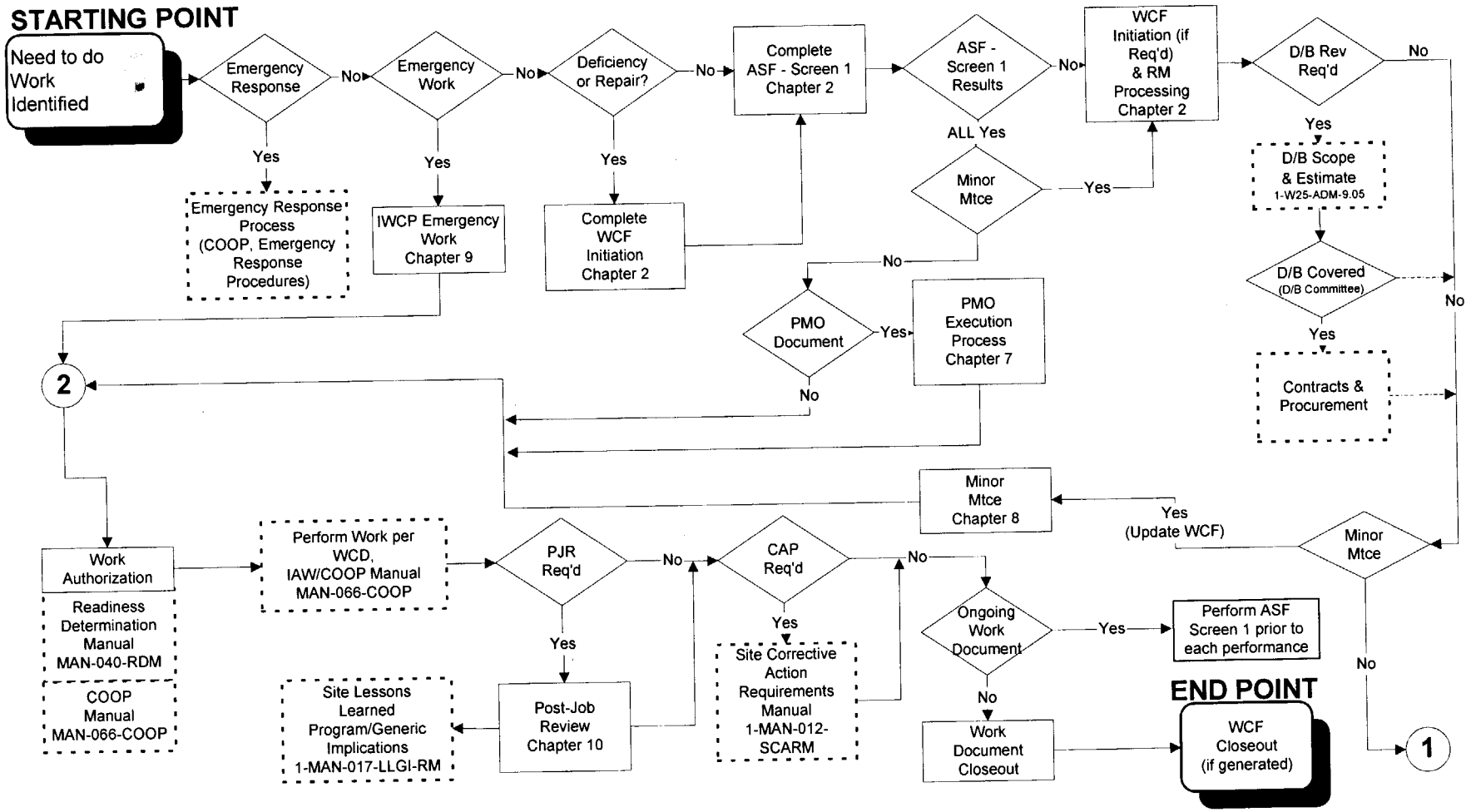
EXEMPTIONS

The following routine activities are prescreened and are exempted from the IWCP Manual documentation requirements. This does **NOT** mean exemption from ISM principles/Site infrastructure requirements. [Chapter 2]

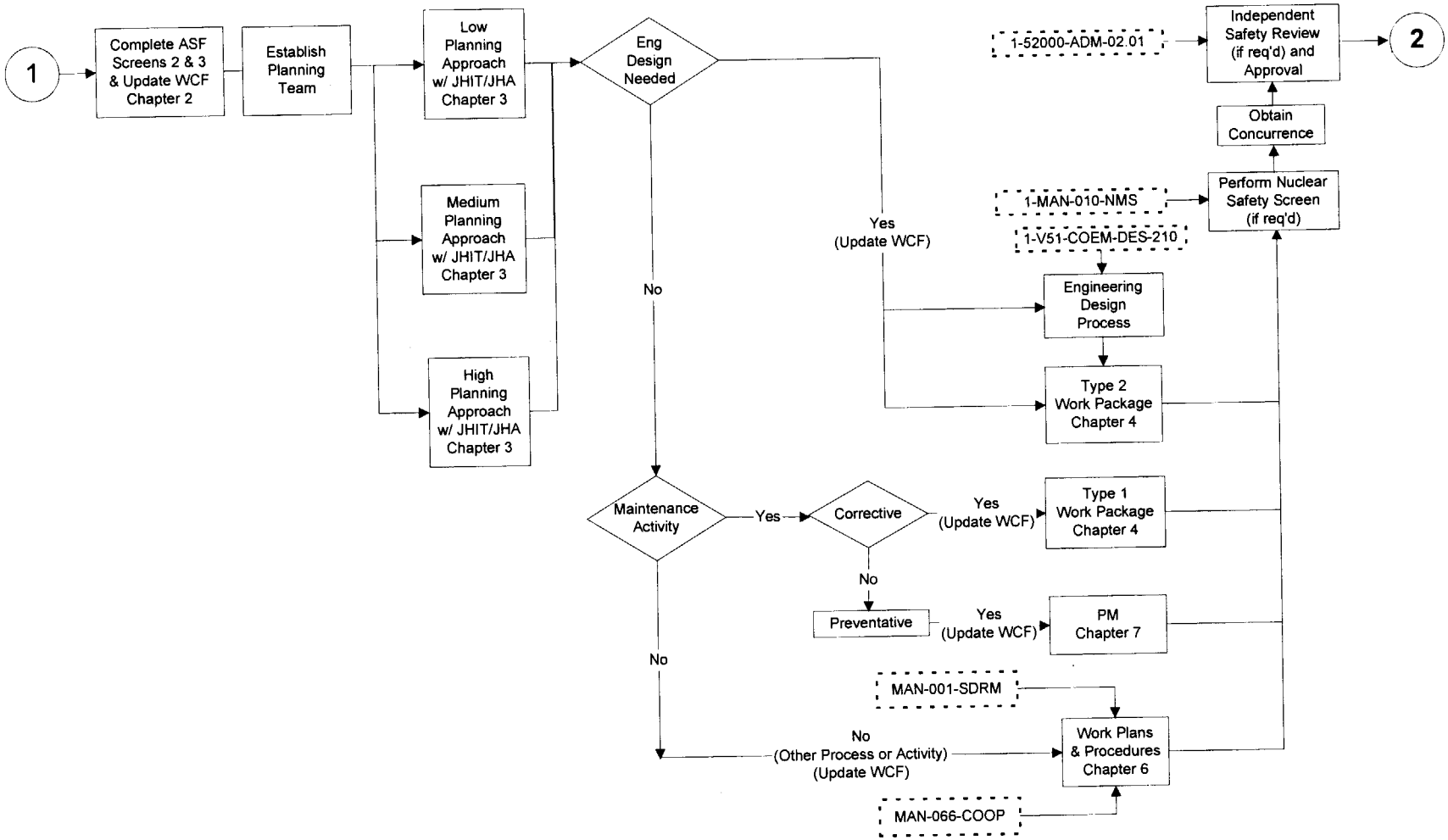
- Routine operation, repair, and servicing of vehicles including automobiles, trucks, graders, forklifts, fire trucks, etc. Critical lifts and load testing are not included.
- Routine operation, repair, and servicing of office equipment including computers, drives, scanners, fax machines, copiers, telephones, electric punching/cutting and stapling equipment, typewriters, office furniture, date/time stamps, postage meters, shredders, blueprint machines, printers, etc.
- Routine operation, repair, and servicing of laboratory equipment including audiometers, medical equipment (excluding x-ray devices), sterilizers, microscopes (excluding electron microscopes), etc.
- Routine operation, repair, and servicing of miscellaneous equipment including security booths, heavy mobile equipment, video badging, binoculars, and exercise equipment.
- Routine support services including cafeteria services; lawn care and grounds maintenance excluding activities resulting in soil disturbances; snow removal; warehouse pickup, delivery, storage/stocking; commodity vendor services; and janitorial services.
- Routine administrative and clerical services, including filing, typing, writing, etc.
- Routine performance of inspections, surveillances, or assessments as long as work as defined in this Manual is not performed.

A routine activity is considered a low hazard activity that is not complex and is conducted with sufficient frequency that activity performance and safety and compliance controls are well known and understood.

APPENDIX 1.1 – FLOW CHARTS & OVERVIEW



APPENDIX 1.1 – FLOW CHARTS & OVERVIEW



APPENDIX 1.2 - REQUIREMENTS

This appendix lists the external standards and requirements which drive the IWCP. Each requirement is identified and the method of compliance is described.

General Requirements Applied to All Work

The *Site Quality Assurance Manual;* 10 CFR 830.120, *Quality Assurance Requirements;* and DOE Order 414.1A, *Quality Assurance* are the quality assurance regulatory documents that apply to all activities at the Site. The requirements that apply to work are specified with the other documents below.

Training and Qualification

The training that is necessary to qualify workers for their assigned tasks is determined via the IWCP planning process. Training provides an important administrative control to job hazards, which are identified during the hazard analysis portion of the planning process. The training **SHALL** emphasize the purpose and use of the safety controls defined in the IWCP for the work.

Requirement

- *DOE Order 4330.4B, Chapter 2, Element 3, "Training and Qualification of Maintenance Personnel", 3.1, Introduction. A maintenance training and qualification program consistent with references in Paragraphs 5g and m should be implemented to develop and maintain the knowledge and skills needed by maintenance personnel to effectively perform maintenance activities. The program should be designed so that the maximum potential of maintenance personnel is fulfilled.*
- *10 CFR 830.120 (c)(ii) for Nuclear Facilities/Activities, Personnel shall be trained and qualified to ensure they are capable of performing their assigned work. Personnel shall be provided continuing training to ensure that job proficiency is maintained.*
- *DOE Order 414.1A, 4. b. (1). (b) Criterion 2-Personnel Training and Qualification; 1 Personnel must be trained and qualified to ensure they are capable of performing their assigned work and 2 Personnel must be provided continuing training to ensure that job proficiency is maintained.*
- *DOE Order 5480.20A, Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities.*

Implementation

Individual companies are responsible for determining qualifications of staff that plan and perform work using IWCP.

Maintenance

This Manual implements selected Maintenance Program requirements from DOE Order 4330.4B. Remaining DOE Order 4330.4B requirements are implemented through other documents. Each of the requirements implemented by this Manual is critical to the overall objective of ensuring the safe and reliable operation of facilities as well as supporting the Site mission for remediation, D&D and demolition. For simplicity, only the citations from Chapter 2 are discussed below.

Types of Maintenance

Requirement

- *DOE Order 4330.4B, Chapter 2, Element 5, "Types of Maintenance", 5.1, Introduction. A proper balance of corrective and preventive maintenance should be employed to provide a high degree of confidence that facility equipment degradation is identified and corrected, that equipment life is optimized, and that the maintenance program is cost effective. The maintenance program includes preventive, predictive, and corrective maintenance.*

APPENDIX 1.2 - REQUIREMENTS

Implementation
Corrective maintenance is implemented by this Manual. Preventive maintenance identification and programmatic implementation is performed through the "Preventive Maintenance Program Plan." Kaiser-Hill and subcontractor responsibilities are identified in this document which includes equipment selection, maintenance action and frequency selection, and database control. The PMWP development and Preventive Maintenance Order work performance are implemented in Chapter 7 of this Manual. Predictive maintenance is not included because of the Site mission and graded approach implementation.

Maintenance Procedures
Requirement

- *DOE Order 4330.4B, Chapter 2, Element 6, and "Maintenance Procedures", 6.1, Introduction. Maintenance procedures and other work-related documents (e.g., drawings and instructions) should be prepared and used to provide appropriate work direction and to ensure that maintenance is performed safely and efficiently. One of the key elements needed to consistently perform maintenance in a safe and efficient manner is the proper use of written procedures. A balanced combination of written guidance, crafts, skills, and workmanship is essential to safe and reliable facility operation.*

Implementation
Maintenance procedure development and revision is implemented by Chapter 8 of this Manual and the Document Management Requirements Manual. The procedures are worked through other Chapters in this Manual, either through the WP Processes or directly through the WCF Process.

Planning of Maintenance
Requirement

- *DOE Order 4330.4B, Chapter 2, Element 7, "Planning, Scheduling, and Coordination of Maintenance", 7.1 Introduction (Paragraph 1). An effective system for planning, scheduling, and coordinating maintenance activities should be implemented in order to: ensure that maintenance is accomplished in a timely manner; improve maintenance efficiency; reduce radiation exposure (ALARA); and increase equipment availability. Planning and scheduling involve assigning priorities that reflect the importance of maintenance work relative to safe and reliable facility operation; identifying logistics, personnel support, and other preparation; and minimizing any adverse impact that the maintenance has on facility operation. Coordination of work ensures that needed support (e.g., clearance tagouts, radiation work permits, quality control) is available (References in Paragraphs 5f, e, and m apply).*

Implementation
Planning is implemented through the three levels of planning defined through the ASF and also through the individual WP processes. Scheduling and coordination of maintenance is implemented through other Site documents.

Control of Maintenance Activities
Requirement

- *DOE Order 4330.4B, Chapter 2, Element 8, "Control of Maintenance Activities", Introduction. Management involvement in control of maintenance activities should ensure that maintenance practices are effective in maintaining safe and reliable facility operation. This control should extend to all facility, other contractor, and subcontractor personnel involved in maintenance activities. Rigorous control of maintenance activities should be directed toward achieving high-quality work performance, personnel safety (including radiological protection), equipment and system protection, and facility safety and reliability.*

APPENDIX 1.2 - REQUIREMENTS

- *The work control program should be based on administrative procedures that address identification of needed work, planning and preparation for work, establishment of conditions to perform work, conduct of work activities, documentation of completed work, post-maintenance acceptance of work, return-to-service procedures, review of completed work records, control of temporary repairs, and controls placed on non-facility contractor and subcontractor personnel working in the facility. The program should also make provision for collecting and storing equipment maintenance data (P. 16).*
- *This Paragraph describes the attributes of an effective program for controlling activity maintenance activities. References in Paragraphs 5e, f, l, and m apply.*
- *CFR 830.120 (c)(2 (i) for Nuclear Facilities and Activities, Work shall be performed to established technical standards and administrative controls using approved instructions, procedures, or other appropriate means. Items shall be identified and controlled to ensure their proper use. Items shall be maintained to prevent their damage, loss, or deterioration. Equipment used for process monitoring or data collection shall be calibrated and maintained.*
- *DOE Order 414.1A, 4. b. (2). (a) Criterion 5-Work Processes: 1 Work must be performed to established technical standards and administrative controls using approved instructions, procedures, or other appropriate means. 2 Items must be identified and controlled to ensure their proper use. 3 Items must be maintained to prevent their damage, loss, or deterioration. 4 Equipment used for process monitoring or data collection must be calibrated and maintained.*

Implementation
This Manual implements the above requirements.

Post Maintenance Testing
Requirement

- *DOE Order 4330.4B, Chapter 2, Element 9, "Post-Maintenance Testing", 9.1 Introduction. Post-maintenance testing should be performed to verify that components will fulfill their design function when returned to service after maintenance. Post-maintenance testing includes all testing performed after maintenance activities. An effective post-maintenance testing program should apply to all maintenance activities and address each organization's responsibilities, equipment to be included, degree and type of testing, procedure needs, acceptance requirements, testing control, and results documentation. Post-maintenance testing could be as simple as checking manual valve for leaks at normal operating pressure after packing adjustment or as detailed as an in-depth diesel generator performance test. This Paragraph describes a program for specifying, performing, documenting and accepting post-maintenance testing. References in Paragraphs 5f and m apply.*

Implementation
The WP processes in this Manual and the Site Engineering Requirements Manual implement this requirement.

Modification Work
Requirement

- *DOE Order 4330.4B, Chapter 2, Element 18, and "Modification Work", Introduction. Facility modification work, including temporary modifications, should be accomplished under the same basic administrative controls as those applied to facility maintenance activities so that there are no increases in risk to facility, equipment, environment, or personnel because of the modification work. This Paragraph describes the required updating to the maintenance program as result of facility modifications and the handling of temporary modifications.*
- *DOE Order 5480.19, Conduct of Operations, also has requirements to control temporary modifications.*

APPENDIX 1.2 - REQUIREMENTS

Implementation
This Manual, the *Conduct of Operations* (COOP) Manual, and the Site Engineering Requirements Manual implement both temporary and permanent modifications. The Site Engineering Requirements Manual provides the engineering design requirements. The COOP Manual controls and tracks temporary modifications. This Manual provides the processes to document, plan, and perform the actual work.

Site Closure Work
Site Closure work to maintain compliance with Environmental Protection Agency, Colorado Department of Public Health and Environment, and National Environmental Policy Act regulations. The Environmental Systems & Stewardship programs provide the specific requirements and limits in accordance with the Rocky Flats Cleanup Agreement (RFCA). This Manual provides the actual work document to implement the actions necessary to perform compliant work.

Operating Procedures
Requirement

- *DOE Order 5480.19, "Conduct of Operations Requirements for DOE Facilities," Guidelines, Chapter XVI, "Operations Procedures", Introduction. Operating procedures are written to provide specific direction for operating systems and equipment during normal and postulated abnormal and emergency conditions. Operations procedures should provide appropriate direction to ensure that the facility is operated within its design bases and should be effectively used to support safe operation of the facility. Other methods of disseminating operational information are addressed in Chapter XI, Operating Orders*

Implementation
Equipment/system operating procedures and AB/SAR surveillance procedures are developed, revised, and implemented through safety and compliance controls of this Manual and the Document Management Requirements Manual. Emergency procedures are under the control of the Site Emergency Preparedness Program.

Nuclear Safety
Requirement

- *DOE C 420.1, Contractors Requirement Document for "Facility Safety", Section 4.1, "Nuclear and Explosive Safety Design Criteria", The contractor is, for nuclear safety, required to ensure that Department of Energy (DOE) nuclear facilities are designed and constructed so as to assure adequate protection for the public, workers, and the environment by application of the requirements contained herein. These requirements apply to the activities of design and construction of new DOE nuclear facilities and of modifications to existing DOE Hazard Category 1, 2, and 3 non-reactor nuclear facilities when the proposed modifications significantly degrades the approved safety basis for the facility. Modifications to facility design and construction during the design and construction phase shall conform to the requirements for new facilities. Activities associated with facility deactivation at end of life are exempt if justified by safety analysis.*

Implementation
This Manual, the *Nuclear Safety Manual* and the Site Engineering Requirements Manual control both design and work implementing documents. This Manual provides the processes to document, plan, and perform the actual physical work. The Nuclear Safety Manual delineates the controls to ensure that nuclear activities are conducted safely. The Site Engineering Requirements Manual provides the engineering design required.

APPENDIX 1.2 - REQUIREMENTS

Documents and Records

Requirement

- *10 CFR 830.120 (c)(1)(iv) for Nuclear Facilities/Activities, Documents shall be prepared, reviewed, approved, issued, used, and revised to prescribe processes, specify requirements, or establish design. Records shall be specified, prepared, reviewed, approved, and maintained.*
- *DOE Order 414.1A, 4. b. (1). (d) Criterion 4-Documents and Records, 1 Documents must be prepared, reviewed, approved, issued, used, and revised to prescribe processes, specify requirements, or establish design. 2 Records must be specified, prepared, reviewed, approved, and maintained.*

Implementation

This Manual references the safety and compliance controls necessary to ensure that required documentation is generated and maintained.

Integrated Safety Management

Requirement

- *DOE P 450.4, Safety Management System Policy describes the five functions and seven principles of ISM and how they are to be applied at DOE sites.*

Implementation

This Manual implements the Site's ISM system by ensuring the five functions of ISM are implemented at the activity level as described in Section 1.4.

Integrated Environmental Management

Requirement

- *DOE 5400.5, "Radiation Protection of the Public and the Environment," Programs shall be established to provide for adequate monitoring to ensure protection of the public and the environment against undue risk from radiation.*
- *40 CFR, "Protection of the Public," Regulations promulgated for the protection of the public and environment by coordinating permits and governmental action to assure those protections by abating and controlling pollution (e.g., RCRA).*
- *K-H Senior Management Policy (Environmental Policy), Policy states that K-H is committed to protecting, and enhancing the environment by complying with all governing laws, permits and compliance agreements.*
- *Integrated Environmental Management Manual, Provides overview of compliance and stewardship programs in place to ensure protection of employees, public and the environment.*

Implementation

The Integrated Environmental Management Manual outlines the K-H Team's Environmental Stewardship Program, Integrated Environmental Management and regulatory requirements. Included in this manual are:

- K-H Environmental Policy
- Integrated Environmental Management Program and environmental pledges
- Environmental Compliance Plan
- Environmental Management Systems
- Program plans and regulatory/site requirements for the 12 environmental media

APPENDIX 1.3 - TRAINING GUIDELINES

As part of the work planning process, safety and compliance controls are developed and implemented to prevent or mitigate hazards. Training is one form of work control that must be considered and requirements determined during the work planning process. Training falls into one of two categories: regulatory required training and job specific training. There are several ways that employees doing work at the Site acquire the necessary training. The RM is responsible for ensuring that personnel who engage in any job effort have the required training prior to the onset of that job. There are tools available to help the RM ensure that these training requirements have been identified and met. This Appendix identifies the drivers for training on Site, defines the two types of training, identifies the various training mechanisms commonly used at the Site, and describes the tools available to manage personnel training compliance.

Training Roles and Responsibilities

Project Planners/Planning Team:

- Identify all relevant training (regulatory required and job-specific training) for the project being planned, including training needs based on hazard assessment activity analyses and identified safety controls (e.g., JHA/IHA).

Managers/Supervisors:

- Ensure that training requirements for required training and job-specific training are identified
- Ensure applicability of training programs
- Periodically assess worker training status
- Schedule workers for training to ensure they remain current
- Review and approve requests for Exceptions from Training
- Ensure that employees attend scheduled training
- Track status of worker training and qualification
- Ensure facility and activity-specific instruction covers the purpose and use of identified safety controls

Contract Technical Representative:

- Identifies subcontractor training requirements based upon activities and areas to be accessed—consult appropriate project and program managers and K-H Training Oversight and Integration for assistance
- Requires workers to be trained prior to work
- Reviews/concurs with exceptions from training for subcontractor employees
- Ensures facility-specific instruction is sufficient for safe and correct job performance by subcontractor employees
- Knows status of subcontractor training

Building/Operations Management:

- Ensures personnel assigned to their facility meet training requirements
- Ensures identified personnel are qualified for their job assignments
- Ensures visitors meet facility entry requirements

APPENDIX 1.3 – TRAINING GUIDELINES

K-H Training Oversight and Integration Integrators:

- Work with projects/companies to assist in interpreting training requirements to meet specific job needs.

Site Documents that Govern Training Practices

The document governing training and qualification practices at the Site is the *Training Users Manual*. Kaiser-Hill has a training procedure that describes specific training practices for K-H. Each contractor should have its own training program plan and supporting procedures that are based on the requirements set forth in the Training Users Manual and concurred with by K-H Training Oversight & Integration. Specific training practices that are not documented by the principal subcontractors default to the Training Users Manual and the K-H training procedure for guidance.

The Training Users Manual sets standards and requirements for all training programs at the Site. It is the definitive source on the training and qualification process at the Site for training requirements, records requirements, exceptions from training, training audience descriptions, course duration, delivery mechanisms, and refresher timing. This is accessible from the Site Intranet.

Types of Training

There are two broad categories of training at the Site. The first is regulatory required training. This type of training includes topics such as radiological training, waste handling and management, nuclear criticality safety, security, and various Occupational Safety & Health Administration (OSHA) driven courses. Regulatory required training content is determined by individual program owners who work with training experts to create curriculum consistent with the federal, state, and site specific driver documents for each program (e.g., Radiological Control Manual, Health and Safety Plan, OSHA, Resource Conservation and Recovery Act (RCRA) permit).

The second type of training is called job-specific training. This includes use of equipment and work processes. For more routine jobs, skill-of-the-craft may cover the need for training, but for more complicated, non-routine work there may be a need for on-the-job training to prevent or mitigate potential hazards associated with doing work with unfamiliar equipment and ensure workers understand the safety controls. Guidance for how to assess on-the-job-training needs, as well as how to implement an on-the-job-training program can be found in the Training Users Manual.

For all work, it must be possible to demonstrate that workers are qualified/competent to perform the assigned work (i.e., skills and knowledge). This includes both regulatory required training and job-specific training. In nuclear buildings, DOE Order 5480.20A mandates that each facility **SHALL** have a written summary of positions requiring certification and qualification requirements. This information appears in the current approved *Training Implementation Matrix*. For any non-routine work, even if it is not in a nuclear facility, it is a good practice to create a training matrix by position for that project (a current example of this may be found in Training Implementation Plans). Implementation of competency requirements **SHALL** use a graded approach consistent with the hazards and risks associated with the work, the mission and characteristics of the facility, and any other relevant factors. Further details on competency requirements can be found in the Training Users Manual.

APPENDIX 1.3 – TRAINING GUIDELINES

Training Mechanisms

Training takes place at the Site through a variety of media and platforms. This includes classroom, Computer Based Training, and Interactive Videodisc training which are scheduled and delivered through the K-H Training Oversight & Integration group. Web-based training, which will be increasingly available, is accessible via any desktop computer that is connected to the network. The on-the-job-training, including demonstrations and mock-ups, toolbox meetings, pre-evolution briefings, and continuous training programs are all administered at the company/project level.

Training Management Tools

Site training that fulfills regulatory requirements is described in Table 1 of the Training Users Manual. Table 1 provides details about training for area access and ES&H courses applicable to broad audiences. Table 1 does NOT include most job-specific or activity-specific training; these are defined and managed by projects; nor does it include most qualification or certification programs; these are defined and managed by companies. It also does not include training on computer software or personal or professional development topics, as these are defined and managed by individual companies.

The Training Decision Assistant is an interactive tool designed to help users determine their regulatory required training needs by answering questions about the nature of their job. It is available on the Training server that can be accessed via the Site intranet.

The Training Scheduling Records Management Tool is a program that allows users to find out:

- Employee training histories
- Whether employees are current in their required training
- Which employees are current for a given set of training
- Who is currently scheduled for training

The Training Scheduling Records Management Tool allows for more sophisticated management of employee training issues, including on-line scheduling of courses. Both of these programs are available on the Site client/server. Access from one's desktop computer is granted to qualifying individuals by contacting the K-H Training Oversight & Integration group. The Training Scheduling Records Management Tool enables users to create unique training lists that define work qualification. All prospective employees to be assigned to perform work governed by this Manual can be evaluated by the on-line Training Scheduling Records Management Tool to determine if their training history matches the list of training required to be qualified for the work.

CHAPTER 2 - WORK INITIATION & SCREENING

2.1 PURPOSE

This chapter provides the mechanism for requesting or initiating work via a WCF.

This chapter also provides requirements, instructions, and criteria to screen projects/activities by:

- Characterizing an activity
- Profiling the hazards associated with an activity including regulatory drivers/requirements
- Selecting the appropriate work planning process for integrating the appropriate safety management infrastructure programs
- Identifying other required infrastructure programs associated with the planning and execution of an activity
- Identifying additional documentation and checklists required

2.2 SCOPE

The identification of a need to perform work and the initiation and evaluation of the WCF are described. This chapter also describes the required planning elements for conducting the three levels of work planning which are graded to the complexity of the work, the hazards encountered in performing the work, the uncertainty about the work, and the hazards it entails. The level of work planning required is determined by the results of the ASF. The ASF results are expected to be available for use before planning begins. The three levels of planning are:

- **Low planning level approach** – activity hazards and complexity are low, there is no potential environmental impact and the work is either routine or simple and there is some experience at performing most, if not all, of the work.
- **Medium planning level approach** – usually applied when there are some significant hazards and/or potential for negative environmental impact associated with the work or some uncertainty exists about the hazards. The activity is somewhat complex, or the activity has not been performed by the associated project team at the Site.
- **High planning level approach** – usually applied when there are significant hazards and/or environmental impact associated with the activity (or significant uncertainty exists about the hazards), and there is significant activity complexity or the activity has not been performed by the associated project team at the Site.

2.3 APPLICABILITY

All work, except emergency work, is screened via this Manual. If the work involves corrective maintenance, then a WCF is initiated first. Otherwise, the ASF is generated directly.

The ASF **SHALL** be applied to the following:

- New projects/activities, including research and development
- Any work activity for which the hazards, processes, equipment, or safety and compliance controls have changed since the last time it was performed, or for which the work control/planning documents require development/revision (includes the creation of new or revised procedures, WPs, etc.)
- Prior to commencing work

Any new subcontracted services or procurements or modifications/changes to existing services or procurements **SHALL** be performed per APR-111.

No work performed at the Site is exempt from the requirements of this Manual without first being screened. The ASF will identify any activities for which adequate safety and compliance controls currently exist for performing work safely and compliantly, and no additional planning effort is required. To assist the RM in using the ASF and clarifying those activities for which adequate safety and compliance controls currently exist, the following bulleted items have been pre-screened and **may** be conducted using good technical judgment by those performing the work. Any pre-screened activity **may** be performed within the requirements of the IWCP, if deemed appropriate by the job supervisor.

To ensure safe and compliant work performance, RMs **Should** consider screening some of the projects/activities listed below that potentially have higher degrees of hazards/impact on the environment, complexity, uncertainty; or that are not routinely performed. In addition, RMs **Should** pay particular attention to discovery of new hazards, regulatory requirements, or other areas that can change the scope of work or safety and compliance control set. Discovery of uncharacterized hazards is typically indicative of high uncertainty in the hazard profile and could affect a facility's AB.

The following routine operations, repair, and servicing activities are prescreened and exempted from the IWCP Manual documentation requirements (it should be noted that exemption from IWCP does not mean exemption from ISM and other Site infrastructure requirements). Persons conducting work on these activities **SHALL** continue to follow the functions and principles of ISM including identifying the hazards, regulatory requirements and establishing the proper safety and compliance controls to perform the work safely:

- Routine operation, repair, and servicing of vehicles including automobiles, trucks, graders, forklifts, fire trucks, etc. Routine repair and servicing includes fueling, vehicle tire changes, engine/body repair, battery testing, alignment, fluid replacement, windshield replacement, etc. Critical lifts and load testing are not included. All generated wastes must be compliantly managed.
- Routine operation, repair, and servicing of office equipment including computers, drives, scanners, fax machines, copiers, telephones, electric punching/cutting and stapling equipment, typewriters, office furniture, date/time stamps, postage meters, shredders, blueprint machines, printers, etc. Any hazardous waste generated must be compliantly managed.
- Routine operation, repair, and servicing of laboratory equipment including audiometers, medical equipment (excluding x-ray devices), sterilizers, microscopes (excluding electron microscopes), etc.
- Routine operation, repair, and servicing of miscellaneous equipment including security booths, heavy mobile equipment, video badging, binoculars, and exercise equipment.
- Routine support services including cafeteria services; lawn care and grounds maintenance (e.g., mowing grass, tree trimming) excluding activities resulting in soil disturbances; snow removal; warehouse pickup, delivery, storage/stocking; commodity vendor services (e.g., paper/office suppliers, refilling vending machines); and janitorial services. If workers encounter rodent nests or droppings at any point during the work process, they should stop work and contact Safety and Health for guidance because of the potential Hantavirus danger.
- Routine administrative and clerical services, including filing, typing, writing, etc.
- Routine performance of inspections, surveillances, or assessments as long as work as defined in this Manual is not performed (i.e., opening containers, moving equipment/material)

A routine activity is considered to be a low hazard activity that is not complex and is conducted with sufficient frequency that activity performance and safety and compliance controls are well known and understood.

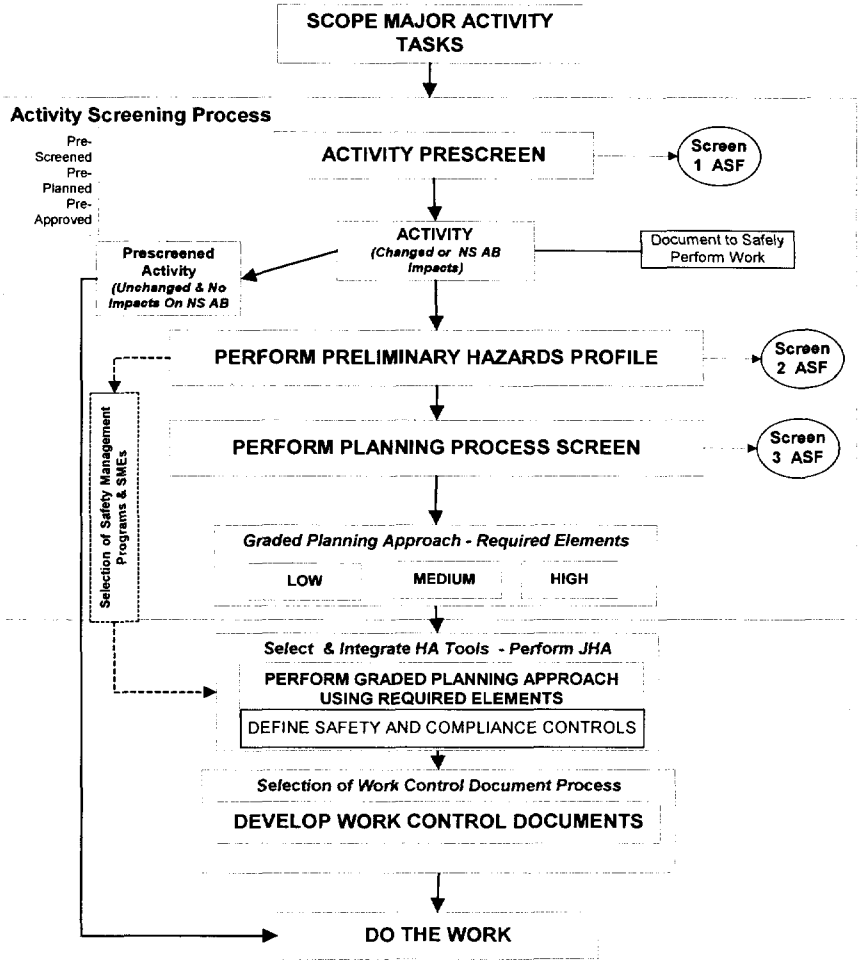
2.4 OVERVIEW

The generation of a WCF (Appendix 2.1) and an ASF (Appendix 2.2) facilitates the decision-making processes which are essential to ISM. Once work is identified, the ASF identifies the integrated work planning and control process to be used to plan a work activity. Specifically, identified work activities planned each fiscal year as part of the Site mission require an appropriate planning approach to ensure that work is performed safely.

The appropriate level of work planning is selected as a function of hazard, experience, uncertainty, and complexity. The ASF is designed to help RMs characterize activities, profile hazards, and identify infrastructure programs and level of planning that will be used to derive safety and compliance controls for preventing or mitigating the hazards posed by the activity under consideration. Figure 2-1 summarizes the role of the ASF within the context of the work planning processes.

ACTIVITY SCREENING WITHIN OVERALL WORK PLANNING AND EXECUTION

Figure 2-1



2.4.1 Safety Equipment

"Safety Equipment" is defined as a piece of equipment, personal protective equipment (PPE), system, etc. that controls hazards to an acceptable level of risk so that if used properly, there is a "practical certainty" that no harm will result to exposed workers, the public, or the environment. This includes engineered hazard controls, etc. but does not include administrative or procedural controls. For nuclear facilities, this definition includes the definition of safety-class and safety-significant structures, systems, and components as defined by the Nuclear Safety Manual.

Safety Equipment will be considered adequately validated and documented if it is approved by a recognized authority (i.e., ANSI, ASTME, UL, NFPA, etc.). This definition applies to the prioritization of work described in Table 2-1, Work Priority Descriptions. This will also help managers, engineers, and the planning team determine the importance of equipment and components used in the performance of the work activity and what level of certification and quality attributes are needed to ensure that the equipment will perform as needed. Equipment that is not important to safety will require a lower level of certification and quality attributes than Safety Equipment.

2.5 INSTRUCTIONS

2.5.1 Emergencies

2.5.1.1 Emergency Response

The first step in the planning process is to determine if a true emergency does or does not exist. True emergencies such as spills, fires, explosions, vehicle accidents, injuries and illnesses, etc. require emergency response, rather than a methodical evaluation of scope and hazards. Emergency responses are performed by trained professionals such as Emergency Medical Technicians and follow emergency response procedures rather than IWCP.

2.5.1.2 Emergency Work

Once a determination has been made that an emergency response is not required or has been completed, an activity is evaluated to see if it involves emergency work. Emergency work requires immediate action to prevent serious personal injury, harm to the environment, serious loss of property or breach of security or ensures regulatory compliance. If the activity involves emergency work then no additional screening is required and the work is performed in accordance with Chapter 9.

2.5.2 Non-Emergencies

2.5.2.1 Deficiencies and Repairs

Once an activity has been determined not to involve emergency work, then a determination is made whether it involves a deficiency or a repair. If it does, first initiate a WCF, if not already opened. If it does not, then an ASF Screen 1 is initiated. If the work is not a deficiency or repair, a WCF is initiated after Screen 1 is completed. A WCF acts like a traveler for a WCD, summarizing data, determinations, choices and status. The form is filled out sequentially from origination through closure. Each section includes additional information necessary to ensure the IWCP process is followed. For work plans, procedures, preventive maintenance, and SWP development, the WCF is closed after the work document is approved.

2.5.2.2 Filling Out The WCF

Section 1 - Report Initiation
The originator uses this section of the WCF to document the details about the work activity. The data to be inserted in this section is self-explanatory.

NOTE: *The RM **Should** be contacted if the originator is uncertain about information in Sect. 1.*

Section 2 - Shift Manager/RM Review
The Shift Manager/RM **SHALL** review the WCF for any impacts on the safety or compliance status of the facility, along with any immediate impacts to any applicable AB documentation. Appropriate immediate actions **SHALL** be taken as required by any applicable AB and/or the COOP Manual.

Section 3 - Responsible Manager Evaluation
The RM completes this section of the WCF to assign a work priority, support requirements, work description, responsible organization, and a desired resolution date.

If the identified condition is not considered to be deficient, or the work requested is not considered to be valid, then the RM disapproves the WCF, listing justification and returns the original WCF to the originator.

Project Data
The RM **SHALL** also establish a priority for the work (Table 2-1) and if additional documentation or information is required, the RM **Should** return the WCF to the originator for the necessary documentation. RMs **may** develop procedures and processes to describe methods, in addition to IWCP, that are used to prioritize and schedule facility work activities.

NOTE: *If the work activity is determined to be Priority 1, Emergency Work, proceed directly to Chapter 9, Emergency Work Process. The WCF **may** be completed upon completion of the Emergency Work, if not completed earlier.*

Table 2-1 – Work Priority Descriptions

Number	Priority	Description
1	Emergency	Requires immediate action to prevent serious personal injury, harm to the environment, including hazardous waste spills, a breach to security, or a serious loss of property.
2	Urgent	Requires rapid action to ensure safety to personnel or the environment, to correct problems deemed critical to sustain the current mission of a facility, or to correct deficiencies in Special Nuclear Materials security alarm systems or environmental regulatory compliance facilities, systems, or hardware as defined in this procedure.
	2A	Involves rework of safety class or safety significant system, structure or component
	2B	Involves modifications to safety class or safety significant system, structure or component
	2C	Involves safety work not involving equipment in 2A or 2B
	2D	Involves work to maintain environmental regulatory compliance for facilities, systems, or hardware.
3	Required	Requires routine action to comply with technical or administrative requirements.
4	Desirable	Requires routine action to implement improvements or correct deficiencies not directly related to sustaining the mission of the facility.

The RM will complete the IMPACTS AND SUPPORT REQUIREMENTS SECTION of the WCF, by answering the following questions:

ENGINEERING SUPPORT NEEDED is circled YES if:

- The requested work activity replaces or modifies a system, structure or component with other than original or like-for-like replacement item
- The requested work changes physical configuration
- The requested work activity modifies the Site's technical basis configuration for a facility, system, structure or component, safety-related software or Site lands
- A replaced item requires more than minor connecting hardware for installation.

IMPACTS OSR/TSR is circled YES if:

- The requested work activity creates an out-of-tolerance condition per any AB
- The identified condition challenges an Operational Safety Requirement (OSR) / Technical Safety Requirement (TSR)

IMPACTS CRITICALITY SAFETY is circled YES if:

- The requested work activity requires modifications or repairs hardware important to criticality safety or software including limits
- The identified condition impacts an assumption or control identified in a Criticality Safety Evaluation.

AB SAFETY SYSTEM is circled YES if:

- The identified condition challenges the operability of equipment important to safety
- The requested work activity modifies or repairs equipment important to safety
- The requested work activity requires modification of equipment important to safety

IMPACTS ENVIRONMENAL COMPLIANCE OR POSES ENVIRONMENTAL HARM is circled YES if:

- The requested work activity creates a change in existing environmental conditions
- The requested work activity impacts a regulatory requirement, permit condition or agency requirements

Davis-Bacon Section

DAVIS-BACON REVIEW is circled YES if the work request is Davis-Bacon Act applicable in accordance with the requirements identified in the Davis-Bacon Process. Refer to Davis-Bacon Process, 1-W25-ADM-9.05.0

If YES was circled for Davis-Bacon Review, then a Scope and Estimate **SHALL** be performed and submitted for review in accordance with the Davis-Bacon Process. When a review is indicated, work cannot commence on the activity until after a determination has been made.

The RM **SHALL** circle either COVERED, NOT COVERED or BOTH based on the Davis-Bacon determination.

Minor Maintenance Determination

The RM **SHALL** determine if the activity is minor maintenance based upon meeting all of the criteria listed below. Additional guidance to support completion of the Minor Maintenance determination is provided in brackets as applicable for the criteria below.

1. The component is not credited in the Authorization Basis, and the work to be performed will not affect or compromise the operability of any credited components. [In order to answer yes to this criterion, the component must be non-credited (i.e., credit not taken in the AB safety analysis for accident mitigation, such as System Category (SC) 1, 2, or some 3 components) and the system interactions have been identified and shown to have no effect on credited components.]
2. If the component is cited or credited within an AB document, the portion or part being worked clearly and obviously is not relied upon to satisfy or does not affect the component operability requirements. [In order to answer yes to this criterion, all AB controls and requirements associated with the component (SC 1, 2, or some 3 components) are identified and will be complied with.]
3. The integrity of a sealed component will not be violated (i.e. transformer) [A sealed component is; any manufactured component such as molded case circuit breakers, components where if a Manufacturer's seal is broken it would void a warranty, and manufactured components that are clearly and obviously not to be violated.]
4. Material substitutions will clearly and obviously not be involved. [In order to answer yes to this criterion, only identical or equivalent parts (as discussed in Chapter 4) will be used.]
5. Welding identified in the Site Quality Assurance Program to verify conformance shall not be performed.
6. The work performed is of such a minor nature that a written procedure is not required and it will not result in a modification. If a procedure exists, and it has been previously screened or Categorically Excluded by Nuclear Safety, it **may** be used.

If the activity is Minor Maintenance, circle YES on the WCF and conduct work per Chapter 8. Minor Maintenance is exempt from Safety Evaluation Screen/Unreviewed Safety Question Determination (SES/USQD) review per DOE Order 5480.21. No further actions on the WCF are required until the Minor Maintenance Activity is completed, then the WCF Closure – Section 5 **SHALL** be completed. Multiple Minor Maintenance activities **may** be performed against one WCF provided each activity meets the Minor Maintenance criteria in this chapter and it is adequately documented using a Minor Maintenance Documentation Report (Chapter 8).

NOTE: *Upon completion of Minor Maintenance activities, the system, structure, or component will be restored to compliance with its functional criteria. Requirements for returning systems and components to service are in the COOP Manual and the SERM.*

NOTE: *When more than one organization participates in the resolution process, the assignment reflects the organization with primary or lead responsibility; the Maintenance Manager **may** assume the lead responsibility.*

WCF Approval

The RM **SHALL** assign the WCF to the Responsible Organization by recording the organization name on the RESPONSIBLE ORGANIZATION line (for example, Operations, Maintenance, or Engineering) and signing the form with his/her employee number.

Enter this information into the WCF Database and obtain the work control number, with the exception of WP&Ps discussed in Chapter 6. For WP&Ps, enter the procedure or plan number in the Work Control No. block on the WCF. The WCF is then forwarded to the Responsible Organization.

Section 4 - Responsible Manager Planning

Activity Screening Form Summary

The RM **SHALL** complete the ASF per Appendices 2.2 and 2.3 of this chapter, if not previously performed, and document the PLANNING LEVEL by circling either HIGH, MEDIUM, or LOW, depending on the results of the ASF. Note that an ASF may have already been performed.

The relevant SME support based on the results of the ASF screen **SHALL** be documented by circling the appropriate discipline.

Work Document Selection

The RM **SHALL** determine the method for WCD development based on the following:

- Type 1 Work Package (Chapter 4) is used for activities that do not involve an engineering design package
- Type 2 Work Package (Chapter 4) is used for activities that require an engineering design package as defined by Site Engineering Process Procedure, 1-W51-COEM-DES-210
- Standard Work Package (SWP) (Chapter 5) is used for repetitive activities
- Work Plans and Procedures (Chapter 6) are used for those activities that do not fall under the category of maintenance or do not require an engineering design package. These are usually activities that are used for operations of equipment or systems, or risk reduction operations
- PMWP (Chapter 7) is used for those activities that are classified as Preventive Maintenance
- Minor Maintenance (Chapter 8) is used for activities that meet the definition under the Minor Maintenance Determination in Section 2.5.2.2

The RM **SHALL** then sign and record his/her employee number on the WCF. This information is then entered into the WCF Database, with the exception of WP&Ps discussed in Chapter 6. After an approved WCD (and a Preventive Maintenance Order for preventive maintenance) has been developed the work **may** be performed.

Section 5 - Closeout

The RM **SHALL** annotate whether or not the following activities were required for the WCD:

- Post Job Review performed
- Corrective Action Program action required
- Lessons Learned input performed
- Occurrence Report filed, including report number
- Should be filed in the Administrative Record (AR) if the work was a CERCLA action

The RM **SHALL** document if the work was canceled or completed, and close out the WCF in the WCF Database and sign the WCF for closure, except for open minor maintenance WCFs described in Chapter 8. Close out of the WCF in the database **SHALL** be completed in a timely fashion after the WP has been closed out.

The RM **SHALL** ensure that if the work was cancelled, the project/material was left in a safe configuration and that any work performed has been documented in accordance with the Site's Configuration Management Program and other applicable infrastructure programs as necessary.

APPENDIX 2.1 - WORK CONTROL FORM
Page 1 of 2

WORK CONTROL FORM Page 1 of 2

WORK CONTROL NO. _____

SECTION 1 REPORT INITIATION

ORIGINATOR DATA

NAME: _____ EMP NO: _____ DATE: _____ TIME: _____
COMPANY/ORG: _____ BLDG: _____ EXT: _____
SOURCE DOCUMENT NO.(Attach Copy): _____

EQUIPMENT/FACILITY DATA

DESCRIPTION OF WORK REQUEST: _____

EM/PM NO: _____ BLDG NO: _____ LOCATION: _____
EQUIPMENT NAME/DESCRIPTION: _____
MANUFACTURER: _____ MODEL NO: _____ SERIAL NO: _____
SYSTEM CATEGORY: 1/2 Credited 3 Other

SECTION 2 SHIFT MANAGER/RM REVIEW

Comments: _____

SHIFT MANAGER SIGNATURE: _____ EMP NO: _____

SECTION 3 RESPONSIBLE MANAGER EVALUATION

PROJECT DATA

PROGRAM AREA: _____ COMPLIANCE DATE (IF ANY): _____
CORRECTIVE ACTION TITLE: _____
PRIORITY LEVEL: 1 2 2A 2B 2C 2D 3 4 WBS CODE: _____
RESOLUTION/COMMENTS: _____

IMPACTS AND SUPPORT REQUIREMENTS

ENGINEERING SUPPORT NEEDED: Yes No IMPACTS OSR/TSR: Yes No
IMPACTS CRITICALITY SAFETY: Yes No AB SAFETY SYSTEM: Yes No
IMPACTS ENVIRONMENTAL COMPLIANCE OR POSES ENVIRONMENTAL HARM: Yes No

DAVIS-BACON DETERMINATION

DAVIS-BACON REVIEW REQUIRED: Yes No
DAVIS-BACON DETERMINATION: Covered Not Covered Both

APPENDIX 2.1 – WORK CONTROL FORM
Page 2 of 2

WORK CONTROL FORM
Page 2 of 2

MINOR MAINTENANCE DETERMINATION

The following criteria must all be met in order to perform the activity as Minor Maintenance:

1. The component is not credited in the Authorization Basis, and the work to be performed will not affect or compromise the operability of any credited components.
2. If the component is cited or credited within an AB document, the portion or part being worked clearly and obviously is not relied upon to satisfy or does not affect the component operability requirements.
3. The integrity of a sealed component will not be violated (i.e. transformer).
4. Material substitutions will clearly and obviously not be involved.
5. Welding identified in the Site Quality Assurance Program to verify conformance shall not be performed.
6. The work performed is of such a minor nature that a written procedure is not required and it will not result in a modification. If a procedure exists, and it has been previously screened or Categorically Excluded by Nuclear Safety, it **may** be used.

Minor Maintenance **SHALL** not result in modifications to equipment or facilities.

MINOR MAINTENANCE: Yes No

RM APPROVAL

RESPONSIBLE ORGANIZATION: _____ DATE: _____ TIME: _____

RESPONSIBLE MANAGER SIGNATURE: _____ EMP NO: _____

SECTION 4 | RESPONSIBLE MANAGER PLANNING

ACTIVITY SCREENING FORM SUMMARY

PLANNING LEVEL: High Medium Low

SME SUPPORT: H&S RAD NS ENG CRIT ENV OTHER

WORK DOCUMENT SELECTION

WCD TYPE: Type 1 Type 2 SWP WP&P PMWP Minor Maintenance

RM APPROVAL

RESPONSIBLE MANAGER SIGNATURE: _____ EMP. NO.: _____

SECTION 5 | CLOSEOUT

FEEDBACK

POST JOB REVIEW: Yes No CAP: Yes No

LESSONS LEARNED INPUT: Yes No

OCCURRENCE REPORT: Yes No REPORT NO.: _____

PLACE IN AR FOR CERCLA ACTIONS: Yes No

RM CLOSURE

WORK IS: Canceled Completed CLOSED IN WCF DATABASE Yes No

If cancelled, has the appropriate engineering analysis and contingency planning been performed Yes No

RESPONSIBLE MANAGER SIGNATURE: DATE: _____

RF-47454 03/00

APPENDIX 2.2 - ACTIVITY SCREENING FORM

BLOCK A – ACTIVITY INFORMATION	**BLOCK C – APPROVALS**
Activity Title:	Responsible Manager (RM) Approval: ____ Name (Print) ____ Signature ____ Ext. ____ Date
Specific Work Location (s):	Confirmation from another RM (Score of 35-45 per Block E): ____ Name (Print) ____ Signature ____ Ext. ____ Date
Major Tasks/activities: 1. 2. 3. 4. 5. 6. 7. 8.	Environmental Manager: Evaluated need for an Environmental Checklist/Evaluation and initiated one if necessary. ____ Name (Print) ____ Signature ____ Ext. ____ Date Planning Team Subject Matter Experts: ____ Name ____ Org. ____ Name ____ Org. ____ Name ____ Org. ____ Name ____ Org. ____ Name ____ Org. ____ Name ____ Org.

BLOCK B – WORK ACTIVITY PRESCREEN -- SCREEN 1	**YES**	**NO**	**COMMENTS**
1) Do work control documents that have been approved, reviewed or used within the past year exist to safely and compliantly perform the work requested?			
2) Are the conditions the same since the last time this activity was performed or the work control document was approved (i.e., work scope, hazards, hazard controls)?			
3) Have the impacts that this specific work activity can have on the requirements and controls of the applicable Authorization Basis (AB) documentation (Nuclear Facility ABs and/or the Site SAR [refer to Appendix 2.4 to determine Site SAR applicability]) been determined?			

Check Appropriate Box ☐ If questions 1 through 3 are answered **YES**, completion and documentation of this ASF is not required for work planning, however, it may be required for procurement activities per acquisition procedure, 1-W36-APR-111.

☐ If any one or more of questions 1 through 3 are answered **NO**, then ASF Screens 2 and 3 must be completed.

APPENDIX 2.2 - ACTIVITY SCREENING FORM

BLOCK D – SCREEN 2 PRELIMINARY HAZARD PROFILE/SME SUPPORT DETERMINATION	Yes	No	SME Support						
Does the work activity involve any of the following:			H&S	RAD	NS	ENG	CRIT	ENV	Other
4) Use of non-ionizing radiation sources or devices, other than welding equipment (*e.g., lasers, microwaves*)?			X						
5) Entry into a confined space?			X						FP
6) Potential for exposure to any electrical, mechanical (e.g., rotating equipment, water hammer), hydraulic or pressure systems; compressed gases; or pressure vessels that are not controlled or protected from direct exposure to the workers?			X			X	X		
7) Worker exposure to chemical environments that may be Immediately Dangerous to Life and Health (e.g., Carbon Monoxide, Carbon Dioxide, or oxygen deficient atmospheres)?			X						
8) Inhalation, ingestion, or injection hazards related to lead, lead products, or lead contaminated equipment; beryllium or beryllium contaminated equipment; or to carcinogenic materials *(e.g., PCBs, asbestos)*?			X						
9) a) Vehicle access into the Protected Area, including unsearchable vehicles; b) non-cleared or foreign national personnel access into security areas; c) classified, unclassified controlled nuclear information, sensitive, or export controlled matter; d) closing of any roadways; e) use of transmitting devices or privately (non-government) owned computer equipment in the Protected Area; f) transport of bulk items across security boundaries; and g) cash assets and/or high value government equipment subject to theft?									S&S
10) Access, generation, storage, destruction, or discussion of classified information or sensitive unclassified controlled nuclear information, export company proprietary, company sensitive?									S&S
11) The potential to involve personnel security issues such as: a) personal security concerns; b) politically/socially sensitive activities likely to result in public protest activities; c) significant potential for labor dispute; and d) have significant sabotage potential (which might result in public risk, work schedule slippage, milestone missed, or DOE/contractor embarrassment)?									S&S
12) Be performed on, near, or in the vicinity of any security system, boundary, or barrier (e.g., Perimeter Intrusion Detection and Alarm System, alarm or access system, Material Access Area boundary, emergency power system, or trunked radio communication system)?									S&S
13) Use of radioactive sources, or radiation producing devices, or devices which contain radioactive sources, other than radiological check sources (*e.g., radiography, x-ray machines*)?				X					
14) Work to be performed inside of a: a) contamination area; b) high contamination area; c) airborne radioactivity area; or d) area previously designated as one of these?				X					
15) Work to be performed inside of a: a) radiation area; b) very high radiation area; or c) area previously designated as one of these?				X					

Note: Criticality Engineering support is only required whenever work is within the purview of buildings that are governed by the Nuclear Criticality Safety Manual. H&S – Health & Safety, RAD – Radiological Engineering/Operations, NS – Nuclear Safety, ENG – Engineering, CRIT – Criticality Engineering, ENV – Environmental, FP – Fire Protection Engineering or Fire Department as appropriate, FSC – Firearms Safety Committee, S&S – Safeguards & Security, TRAN – Transportation, WO – Waste Operations

APPENDIX 2.2 - ACTIVITY SCREENING FORM

BLOCK D – SCREEN 2 PRELIMINARY HAZARD PROFILE/SME SUPPORT DETERMINATION	Yes	No	SME Support						
			H&S	RAD	NS	ENG	CRIT	ENV	Other
Does the work activity involve any of the following:									
16) Work with, processing, or packaging radioactive material including radioactive wastes and/or fissile material which may require criticality controls?				X	X		X		
17) Work with non-radioactive pyrophoric materials (*e.g., materials susceptible to spontaneous combustion, such as sodium*)?			X					X	FP
18) Use of regulated chemicals or generation of regulated waste chemicals?								X	WO
19) Environmental monitoring (air, ecology, soil, or water) required in the work area?								X	
20) Disturbance of soil, concrete, or asphalt (*activities requiring a soil permit or disposition of large amounts of concrete or asphalt*)?			X	X				X	WO
21) Work area, or any of its contents, subject to any environmental regulations, agency agreements, compliance order agreement, or regulatory permits/authorizations?								X	
22) Equipment impacted/modified by this activity that interacts with any environmental compliance monitoring system?						X		X	
23) Generation of wastes or wastewater (e.g., sanitary, hazardous (RCRA), asbestos, PCB, medical or infectious, low level, transuranic, beryllium contaminated, or oily waste)?			X	X				X	WO
24) Generation of emissions to the air that are not already approved *(e.g., unfiltered contributions to an exhaust stack, fugitive emissions, ozone depleting substances, use of diesel fuel, diesel powered equipment, fugitive dusts, or other issues)*?			X	X				X	
25) A release or discharge, or a potential for a release or discharge to soil or surface waters such as streams, wetlands (marshy or boggy area), storm drains, sanitary sewers, or ponds?			X					X	
26) Construction of a waste treatment, storage, or disposal unit; or work within a RCRA regulated unit or an Individual Hazardous Substance Site or other CERCLA sites as defined within the RFCA?			X	X		X		X	WO
27) Modification of a RCRA or PCB storage unit (e.g., berms or flooring for containment)?			X			X	X	X	
28) During the normal conduct of this work activity (no upsets or accidents): • Potential to disturb migratory birds or any threatened, endangered, or special-concern species • Potential to adversely affect any wetland, designated natural area, surface or groundwater, or cultural resources? • Is the activity perceived to have any impact or potential impact on the environment?								X	
29) Firearms or explosives (*excludes explosive chemicals which are included in the next question*)?			X				X		FP, S&S FSC

Note: Criticality Engineering support is only required whenever work is within the purview of buildings that are governed by the Nuclear Criticality Safety Manual. H&S – Health & Safety, RAD – Radiological Engineering/Operations, NS – Nuclear Safety, ENG – Engineering, CRIT – Criticality Engineering, ENV – Environmental, FP – Fire Protection Engineering or Fire Department as appropriate, FSC – Firearms Safety Committee, S&S – Safeguards & Security, TRAN – Transportation, WO – Waste Operations

APPENDIX 2.2 - ACTIVITY SCREENING FORM

BLOCK D – SCREEN 2 PRELIMINARY HAZARD PROFILE/SME SUPPORT DETERMINATION	**Yes**	**No**	**SME Support**						
Does the work activity involve any of the following:			**H&S**	**RAD**	**NS**	**ENG**	**CRIT**	**ENV**	**Other**
30) Work with reactive, shock sensitive, explosive (*e.g., natural gas, hydrogen, propane*) or incompatible chemicals or materials, including decomposition and radiolysis byproducts?			X					X	FP
31) Moving, handling, or transporting Special Nuclear Material, TRU, TRM, or other radioactive, or radioactive pyrophoric, material including liquids?				X	X		X	X	TRAN S&S
32) Installation, modification, relocation, or removal of: 1) any process, building, wall (including fire walls/barriers), enclosure, or tank (above or under ground), 2) a radioactively contaminated; system, process line, or installed piece of equipment; or 3) permanent radiation shielding; that may impact the condition of structures, systems, or components?			X	X	X	X	X	X	FP
33) Any form of welding, cutting, or the use of ignition sources such as, furnaces, hot plates, sparks, open flames (*i.e., "hot work"*)?			X				X		FP
34) Work to be performed near or in the vicinity of any hazardous material, substance, or equipment which is not directly in the scope of this work activity, but has the potential to exacerbate the hazards associated with this or create additional hazards?			X				X	X	
35) Is there a potential for this work activity to have an undesirable impact on, or in a Hazard Category 2/3 nuclear facility, its support systems, or its authorization basis documentation requirements or controls or the Site SAR? (*Includes physical or structural impacts from construction or modifications; utility or support system impacts, such as domestic water, fire water, steam, or electric power; alarms; or analytical impacts from unanalyzed scenarios, such as external events involving the operation of aircraft, trains, or tankers near the nuclear facility. Includes facility radioactive and hazardous material inventory limits, site engineered controls [i.e.: utilities, site systems, propane tank restrictions, pressure relief devices, etc.], site transportation controls, wooden waste box storage controls and safety management programs*)			X	X	X	X	X	X	FP S&S
36) Any ergonomic hazards (i.e., does the activity involve a combination of the following: working in awkward postures, repetitive motion, and/or the use of force to complete the task)?			X						
37) Work with NEW processes, equipment, or tools?			X	X		X			Train-ing
38) Affect any other programs or areas not previously identified? SME support as required by the activity.									
39) Were any of the questions above answered yes that require Environmental or Waste Operations involvement? If yes, see Appendix 2.3, ASF Guide.									
BLOCK D SUMMARY Sum of the total number of questions answered yes in BLOCK D:									

Note: Criticality Engineering support is only required whenever work is within the purview of buildings that are governed by the Nuclear Criticality Safety Manual. H&S – Health & Safety, RAD – Radiological Engineering/Operations, NS – Nuclear Safety, ENG – Engineering, CRIT – Criticality Engineering, ENV – Environmental, FP – Fire Protection Engineering or Fire Department as appropriate, FSC – Firearms Safety Committee, S&S – Safeguards & Security, TRAN – Transportation, WO – Waste Operations

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BLOCK E -- SCREEN 3 PLANNING PROCESS SCREEN	YES	NO	SCORE
HAZARD			
40) Is the Sum of all YES answers in Block D **0 - 5**?	4	0	
41) Is the Sum of all YES answers in Block D **6 -10**?	8	0	
42) Is the Sum of all YES answers in Block D $\geq$ **11**?	14	0	
43) Will the work activity be performed in a Hazard Category 2/3 nuclear facility (*defined in the Site SAR, Vol. 1, Ch. 4*)?	4	0	
44) Is this work activity authorized to be performed by the existing authorization basis (AB) documentation (Nuclear facility ABs or the Site SAR) or regulatory permits/authorizations?	0	4	
45) Is there a potential for this work activity to have an undesirable impact on, or in a Hazard Category 2/3 nuclear facility, its support systems, or its authorization basis documentation requirements or controls or an impact to the environment?	2	0	
46) Is there a potential for this work activity to have an undesirable impact on a Site SAR requirement or control (see Appendix 2.4)?	2	0	
47) Has an analysis of the potential hazards of this work activity or other uncertainties been completed, including the identification of required controls, and has it been documented to support the safety basis or authorization basis for this work activity?	0	4	
48) Can the combined effect of the hazards potentially create additional hazards (*e.g., incompatible chemicals, synergistic impacts*)?	4	0	
49) Can the combined effect of the hazards cause a potential conflict in the controls (*e.g., Radiological Work Permit requires glovebag for containment and criticality limits restrict how much liquid can accumulate in glovebag*)?	4	0	
EXPERIENCE			
50) Have the majority of the personnel (project manager, planners, workers, safety professionals, support staff, etc.) proposed to perform this work activity previously performed **ALL** of this work activity at the Site or any other site within the past 36 months?	0	4	
51) Have the majority of the personnel (project manager, planners, workers, safety professionals, support staff, etc.) proposed to perform this work activity previously performed **PORTIONS** of this work activity at the Site or any other site within the past 36 months?	0	8	

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BLOCK E -- SCREEN 3 PLANNING PROCESS SCREEN COMPLEXITY	YES	NO	SCORE
52) How many major tasks/activities are involved in this work activity *(e.g., install tap, drain tank, disposition liquid, install electrical distribution, site excavation)?*			
Low Complexity ≤ 5 tasks	0	0	
Medium Complexity 6 – 9 tasks	1	0	
High Complexity ≥ 10 tasks	2	0	
53) How many people are involved in actually performing this work activity *(includes support people on scene at any given time or shift, does not include oversight)*?			
Low Complexity ≤ 10 people	0	0	
Medium Complexity 11 – 24 people	1	0	
High Complexity ≥ 25 people	2	0	
54) How many functional organizations provide support during the performance of this work activity *(e.g., process specialists, RCTs, IH, FI, NS, CRIT)*?			
Low Complexity ≤ 4 organizations	0	0	
Medium Complexity 5 – 9 organizations	1	0	
High Complexity ≥ 10 organizations	2	0	
55) How many contractors are directly involved in actually performing this work activity?			
Low Complexity ≤ 3 subcontractors	0	0	
Medium Complexity 4 – 7 subcontractors	2	0	
High Complexity ≥ 8 subcontractors	4	0	
SCORING			**TOTAL SCORE**
Add the total scores from lines 40 through 55			

Check Appropriate Box

- ☐ If The Total Score is **0 to 15**, the level of planning required is **LOW**
- ☐ If The Total Score is **16 to 40**, the level of planning required is **MEDIUM**
- ☐ If The Total Score is **41 or greater**, the level of planning required is **HIGH**

NOTE: *If the total score is between 35 and 45, the RM **SHALL** obtain confirmation of the selected level from another RM. From this confirmation, the RM has the option to revise the selection. The RM has the final responsibility for selection of the work planning process; however, senior management may elect to upgrade the level of planning at their discretion.*

APPENDIX 2.3 - ACTIVITY SCREENING FORM GUIDE

Activity Screening Form (ASF) Instructions

The purposes of the ASF are to identify the programs and SMEs that need to be involved in the planning process and to determine which level of planning is required. A more detailed analysis of the hazards involved is accomplished through the JHIT/JHA process. This guide gives instruction in filling out the ASF, the SMEs required for planning based on the ASF results, and clarification of the questions, examples, and references.

The scope of work for large projects should be developed and broken down into smaller manageable activities, as long as the activity and hazards have been looked at as a whole to determine if there are any combined hazards. Each activity should be small enough so that it may be adequately controlled by the RM, allowing safe and compliant performance of the work. Each activity should also be small enough so that the work, regulatory, and safety requirements can be understood by the project planning team and the workers performing the activity.

The scope of projects **SHALL** not be broken down solely to allow a less rigorous level of review and planning. Projects may be broken down resulting in a less rigorous level of review and planning if it is good project management, such as separate and distinct work scopes, areas, and/or time frames for the project.

The generation of a WCF and an ASF facilitates the decision-making processes which are essential to work control integration. Once work is identified, the ASF identifies the integrated work planning and control process to be used to plan a work activity. Specifically, identified work activities planned each fiscal year as part of the Site mission require an appropriate planning approach to ensure that work is performed safely. The appropriate level of work planning is selected as a function of hazard, experience, uncertainty, and complexity. The ASF is designed to help RMs characterize activities, profile hazards, and identify infrastructure programs and level of planning that will be used to derive safety and compliance controls for preventing or mitigating the hazards posed by the work activity under consideration. Figure 2-1 in Section 2.4 summarizes the role of the ASF within the context of the overall work planning processes.

The ASF (see Appendix 2.2) is divided into five main parts; each described in more detail below.

Block A: Activity Information – Describe the activity to be performed, where it will be located, and the major tasks and activities that will be performed.

Block B, Screen 1: Activity Prescreen - Determine if the work activity to be performed needs further, more detailed screening per this process (for example, perform a prescreen per this process to establish whether the work activity requires assessment to support selecting a work planning process).

Prior to starting this process, the RM collects all available information related to the activity being planned. Once this information is collected, the RM begins the ASF by documenting the project/activity title, description, and specific work location on the first page of the ASF. The RM then completes a prescreen (Screen 1) for the activity. The questions answered for Screen 1 are used to determine if the activity can be performed using existing WCDs with no further screens required. If additional screens are required, then complete both Screens 2 and 3 of the ASF.

If all of the questions in Screen 1 are answered Yes, then no documentation is needed prior to commencing work, and the ASF will not need to be retained as a quality record. However, if the ASF is being conducted for procurement such as new Statement of Works or modifications/changes to existing Statement of Works, then the ASF **SHALL** be retained with the Statement of Work even if all the questions in Screen 1 are answered Yes.

Block C: Approvals – The RM approves the ASF. Another RM confirms the ASF if the activity has a score of 35-45 as determined in Block E. The Environmental Manager also signs if question 39 is answered YES.

Block D, Screen 2: Preliminary Hazard Profile - Perform a profile assessment of the type of hazards associated with the activity (for example, occupational safety, radiological, or environmental hazards) and determine the number of hazard types to be addressed by the work planning process.

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The Preliminary Hazard Profile is used to determine the types of hazards involved with the work activity by answering questions relevant to the number of potential hazards present in the work activity. The overall number of hazards of the work activity is used as data input for the scoring and answering the Planning Process Screen. In addition, the relevant SMEs that are identified in Screen 2 can assist the RM in completing the screens and in implementation of the selected level of planning.

Block E, Screen 3: Planning Process Screen - Select the appropriate level of planning to be used for the activity.

The Planning Process Screen is used to select the required level of planning to be performed, which is graded to the hazards, uncertainty, and complexity of the work activity so that the appropriate hazards assessment and safety and compliance controls development tools and techniques are selected. The expectation is that implementation of those controls will result in the work activity being performed safely. After the appropriate level of planning has been selected using the ASF, the RM and a selected team of SMEs conduct the work activity planning. The SMEs are selected from the programs identified in the ASF.

The RM is responsible for completing and approving the ASF Screens. However, it is recommended that the RM obtain SME support to ensure the work activity has been properly scoped and characterized prior to and during screening.

PROCESS OVERVIEW:

The RM **SHALL**:

- Complete Block A of the ASF, Activity Information
- Complete Block B - Activity Prescreen -Screen 1
- If questions 1 through 3 are answered **YES**, completion and documentation of the ASF is not required for work planning, however, it may be required for procurement activities per APR-111.
- If any one or more of questions 1 through 3 are answered **NO**, then ASF Screens 2 and 3 must be completed.
- If Screen 2 is required, complete Block D by checking YES or NO for each hazard listed
- Total the number of Yes answers in Screen 2, then proceed to Screen 3
- If Screen 3 is required, complete all sections in Block E
- Sum the Score column for lines 40 through 55 and enter this as a total score
- If the TOTAL SCORE is between 0 and 15, use the LOW planning level requirements for this work activity.
- If the TOTAL SCORE is between 16 and 40, use the MEDIUM planning level requirements for this work activity.
- If the TOTAL SCORE is equal to or greater than 41, use HIGH planning level requirements for this work activity.
- If the total score is between 35 and 45, the RM **SHALL** obtain confirmation of the selected level from another RM. From this confirmation, the RM has the option to revise the selection. The RM has the final responsibility for selection of the work planning process; however, senior management **may** elect to upgrade the level of planning at their discretion.
- Complete Block C of the ASF.
- The RM **SHALL** use SME expertise as necessary to accurately complete the ASF.

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BLOCK A – ACTIVITY INFORMATION
Activity Title
Give title of the project or sub-project that will be covered by the work package/procedure to be developed.
Specific Work Location (s)
Give building or area where the work will be performed.
Major Tasks/activities
Give a listing of the major activities and tasks that will be required to perform the work.
BLOCK B – WORK ACTIVITY PRESCREEN -- SCREEN 1
1) Do work control documents that have been approved, reviewed or used within the past year exist to safely and compliantly perform the work requested?
Are there approved procedures, required permits in place, standard work packages, work packages, preventive maintenance WP, environmental checklist, operations orders, etc. that can be used to perform the work? Do you need a work document? For the prescreened activities identified in Section 2.3, this question **may** be answered "Yes". For activities determined to be Minor Maintenance using the WCF Minor Maintenance criteria, Chapter 8, Minor Maintenance is considered to be the approved WCD. Review means that the original ASF, JHIT, and JHA are reviewed to ensure that the hazards and hazard controls identified are still adequately implemented in the WCD. Any WCD reviews used to satisfy this prescreen question **SHALL** be documented in the work control document history file.
2) Are the conditions the same since the last time this activity was performed or the work control document was approved (i.e., work scope, hazards, hazard controls)?
This is meant to look at any changes that could be significant to performing the work safely. Are the work scope, the hazards and hazard controls the same so that the work would be expected to have similar results and effects as when it was previously performed? This is not meant to include minor, insignificant changes. Has an Environmental Checklist been completed if needed?
3) Have the impacts that this specific work activity can have on the requirements and controls of the applicable Authorization Basis (AB) documentation (Nuclear Facility ABs and/or the Site SAR [refer to Appendix 2.4 to determine Site SAR applicability]) been determined?
Has the work had a nuclear safety evaluation screen performed for it or has it been excluded from this requirement? Is there documentation (i.e., SES/USQD, categorical exclusion, AB, etc.) that allow the work to be performed?
Check Appropriate Box
Check the appropriate box to show the results of Screen 1. If questions 1 through 3 are answered **YES**, completion and documentation of this ASF is not required for work planning, however, it may be required for procurement activities per acquisition procedure, 1-W36-APR-111. If any one or more of questions 1 through 3 are answered **NO**, then ASF Screens 2 and 3 must be completed.
BLOCK C – APPROVALS
Responsible Manager Approval:
The RM is the manager directly responsible and accountable for the development, implementation, and performance of the work (For example, Facility Manager, Building Manager, Operations Manager, Maintenance Manager, Engineering Manager, and/or Project Manager).
Confirmation from another RM (Score of 35-45 per Block E):
If the total score from Screen E, Block 3, is between 35 and 45, the RM **SHALL** obtain confirmation of the selected level from another RM. From this confirmation, the RM/PM has the option to revise the selection. The RM/PM has the final responsibility for selection of the work planning process; however, senior management may elect to upgrade the level of planning at their discretion.
Environmental Manager: Evaluated need for an Environmental Checklist/Evaluation and initiated one if necessary.
If question 39 is answered YES, the Environmental Manager **SHALL** evaluate if an Environmental Checklist is necessary and if it is, they shall begin the process to perform one and get it approved.
Planning Team Subject Matter Experts:
These are the SMEs that the RM requests to be assigned to support the planning effort. The programmatic areas identified in the ASF **SHALL** be represented on the work planning team.
BLOCK D – SCREEN 2
4) Use of non-ionizing radiation sources or devices, other than welding equipment?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety. For example, lasers, microwaves, etc.

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5) Entry into a confined space?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety, Fire Department
A confined space is defined as - A space that is: Large enough and so configured that an employee can bodily enter and perform assigned work, has limited or restricted means for entry or exit (i.e., tanks, vessels, silos, storage bins, hoppers, vaults and pits are spaces that may have limited entry), and is not designed for continuous employee occupancy. (MAN-072-OS&IH PM, OS&IH Program Manual, Chapter 21)
6) Potential for exposure to any electrical, mechanical, hydraulic or pressure systems; compressed gases; or pressure vessels that are not controlled or protected from direct exposure to the workers?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety, Engineering, Criticality
Engineering support is required whenever work is for buildings that are governed by the Nuclear Criticality Safety Manual.
For example, mechanical systems could include rotating or cutting equipment. This is to help determine if engineering controls can be used to control the hazard or if administrative controls would be required. Water hammer in steam lines can potentially expose workers to uncontrolled energy. Refer to Standing Order 23, *Operation of Steam and Condensate Systems* for the requirements for restoring steam lines, if applicable.
7) Worker exposure to chemical environments that may be Immediately Dangerous to Life and Health?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety
For example, carbon monoxide, carbon dioxide, or oxygen deficient atmospheres.
8) Inhalation, ingestion, or injection hazards related to lead, lead products, or lead contaminated equipment; beryllium or beryllium contaminated equipment; or to carcinogenic materials?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety
For example, lead dust/vapors, PCBs, asbestos, beryllium, etc.
9) a) Vehicle access into the Protected Area, including unsearchable vehicles; b) non-cleared or foreign national personnel access into security areas; c) classified, unclassified controlled nuclear information, sensitive, or export controlled matter; d) closing of any roadways; e) use of transmitting devices or privately (non-government) owned computer equipment in the Protected Area; f) transport of bulk items across security boundaries; and g) cash assets and/or high value government equipment subject to theft?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Safeguards & Security
10) Access, generation, storage, destruction, or discussion of classified information or sensitive unclassified controlled nuclear information, export company proprietary, company sensitive?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Safeguards & Security
11) The potential to involve personnel security issues such as: a) personal security concerns; b) politically/socially sensitive activities likely to result in public protest activities; c) significant potential for labor dispute; and d) have significant sabotage potential?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Safeguards & Security
Sabotage, which might result in public risk, work schedule slippage, milestone missed, or DOE/contractor embarrassment.
12) Be performed on, near, or in the vicinity of any security system, boundary, or barrier?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Safeguards & Security
For example, Perimeter Intrusion Detection and Alarm System, alarm or access system, Material Access Area boundary, emergency power system, or trunked radio communication system.
13) Use of radioactive sources, or radiation producing devices, or devices which contain radioactive sources, other than radiological check sources?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Radiological Operations/ Engineering
For example, radiography, x-ray machines, etc.
14) Work to be performed inside of a: a) contamination area; b) high contamination area; c) airborne radioactive area; or d) area previously designated as one of these?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Radiological Operations/ Engineering
15) Work to be performed inside of a: a) radiation area; b) very high radiation area; or c) area previously designated as one of these?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Radiological Operations/ Engineering

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16) Work with, processing, or packaging radioactive material including radioactive wastes and/or fissile material which may require criticality controls?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Radiological Operations/ Engineering, Nuclear Safety, Criticality Engineering
17) Work with non-radioactive pyrophoric materials?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety, Environmental, Fire Protection Engineering or Fire Department For example, materials susceptible to spontaneous combustion, such as sodium, etc. Pyrophoric material is a material which under normal conditions is liable to cause fires through friction, retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious transportation, handling or disposal hazard. (5820.2A) It is also defined as a substance that ignites spontaneously in air below 130F (54.4C), for example, Phosphorus.
18) Use of regulated chemicals or generation of regulated waste chemicals?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Environmental, Waste Operations
19) Environmental monitoring (air, ecology, soil, or water) required in the work area?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Environmental Does this activity require any additional monitoring for air, soil, or water to detect a possible release of a regulated substance or waste?
20) Disturbance of soil, concrete, or asphalt?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety, Radiological Operations/ Engineering, Environmental, Waste Operations This is for activities requiring a soil disturbance permit or disposition of large amounts of concrete or asphalt.
21) Work area, or any of its contents, subject to any environmental regulations, agency agreements, compliance order agreement, or regulatory permits/authorizations?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Environmental This includes the Rocky Flats Cleanup Agreement, Resource Conservation and Recovery Act Permit, Title V Clean Air Permit, Compliance Orders, Mixed Residue Compliance Order, Site Treatment Plan, National Pollution Discharge Elimination System Permit, or any other compliance orders with the Environmental Protection Agency or the Colorado Department of Public Health and Environment. Regulations include the Resource Conservation and Recovery Act, the Comprehensive Environmental Response Compensation, and Liability Act, Clean Air Act, Clean Water Act or the Toxic Substance Control Act.
22) Equipment impacted/modified by this activity that interacts with any environmental compliance monitoring system?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Engineering, Environmental, Waste Operations For example, the exhaust of a ventilation system which has an air monitor installed, or power to an environmental compliance system. Examples of environmental compliance monitoring systems are; air monitors, gauging systems, etc.
23) Generation of wastes or wastewater?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety, Radiological Operations/ Engineering, Environmental For example, sanitary, hazardous (RCRA), asbestos, PCB, medical or infectious, lead, low level, transuranic, beryllium contaminated, or oily waste.
24) Generation of emissions to the air that are not already approved?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety, Radiological Operations/ Engineering, Environmental For example, unfiltered contributions to an exhaust stack, fugitive emissions, ozone depleting substances, use of diesel fuel, diesel powered equipment, fugitive dusts, or other issues.
25) A release or discharge, or a potential for a release or discharge to soil or surface waters such as streams, wetlands (marshy or boggy area), storm drains, sanitary sewers, or ponds?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety, Environmental For example, soil disturbances near culverts, or drainages where soils can enter site waterways, or <u>any</u> disturbance in a wetland.
26) The construction of a waste treatment, storage, or disposal unit; or work within a RCRA regulated unit or an Individual Hazardous Substance Site or other CERCLA sites as defined within the RFCA?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety, Radiological Operations/ Engineering, Engineering, Environmental, Waste Operations

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27) Modification of a RCRA or PCB storage unit?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety, Engineering, Criticality Engineering, Environmental For example, changing the berms or flooring for containment.
28) During the normal conduct of this work activity (no upsets or accidents): Potential to disturb migratory birds or any threatened, endangered, or special-concern species Potential to adversely affect any wetland, designated natural area, surface or groundwater, or cultural resources? Is the activity perceived to have any impact or potential impact on the environment?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Environmental Threatened, endangered, or special-concern species (For example, Preble's Meadow Jumping Mouse, Bald Eagle, etc.). Cultural resources examples include historical, archaeological, or architectural sites. Is the activity perceived to have any impact or potential impact (beneficial or negative) on the environment?
29) Firearms or explosives?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety, Environmental, Fire Protection Engineering or Fire Department, Safeguards & Security, Firearms Safety Committee, Criticality Engineering support is required whenever work is for buildings that are governed by the Nuclear Criticality Safety Manual. Excludes explosive chemicals which are included in the next question.
30) Work with reactive, shock sensitive, explosive or incompatible chemicals or materials, including decomposition and radiolysis byproducts?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety, Environmental, Fire Protection Engineering or Fire Department Explosive is defined as any chemical compound or mechanical mixture that, when subjected to heat, impact, friction, shock, or other suitable initiation stimulus, undergoes a very rapid chemical change with evolution of large volumes of highly heated gases that exert pressures in the surrounding medium. The term applies to materials that either detonate or deflagrate. (6430.1A) For example, natural gas, hydrogen, propane. Shock sensitive is defined as a material which undergoes visible reaction when mechanically shocked. Radiolysis is defined as a reaction produced by radiation (usually decomposition).
31) Moving, handling, or transporting Special Nuclear Material, TRU, TRM, or other radioactive, or radioactive pyrophoric, material including liquids?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Radiological Operations/ Engineering, Nuclear Safety, Criticality Engineering, Environmental, Transportation, Safeguards & Security See DOE Orders; 5633.3, Change 1; 5500.1A, Change 1; 5632.1A; and 5631.2B for the definition of Special Nuclear Material. Transuranic Waste is defined as – Without regard to source or form, waste is contaminated with alpha-emitting transuranium radionuclides with half-lives greater than 20 years and concentrations greater than 100 nCi/g at the time of assay. Heads of Field Elements can determine that other alpha contaminated wastes, peculiar to a specific site, must be managed as transuranic waste. (5820.2A)
32) Installation, modification, relocation, or removal of: 1) any process, building, wall (including fire walls/barriers), enclosure, or tank (above or under ground), 2) a radioactively contaminated; system, process line, or installed piece of equipment; or 3) permanent radiation shielding; that may impact the condition of structures, systems, or components?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety, Radiological Operations/ Engineering, Nuclear Safety, Engineering, Criticality Engineering, Environmental, Fire Protection Engineering
33) Any form of welding, cutting, or the use of ignition sources such as static electricity, furnaces, hot plates, sparks, open flames?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety, Fire Protection Engineering or Fire Department, Criticality Engineering support is required whenever work is for buildings that are governed by the Nuclear Criticality Safety Manual. Hot work is any temporary operation involving open flames or producing heat and/or sparks including brazing, cutting, grinding, soldering, arc welding or torch applied welding outside of a designated welding area, i.e., shop.
34) Work to be performed near or in the vicinity of any hazardous material, substance, or equipment which is not directly in the scope of this work activity, but has the potential to exacerbate the hazards associated with this or create additional hazards?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety, Environmental, Criticality Engineering support is required whenever work is for buildings that are governed by the Nuclear Criticality Safety Manual.

APPENDIX 2.3 - ACTIVITY SCREENING FORM GUIDE

35) Is there a potential for this work activity to have an undesirable impact on, or in a Hazard Category 2/3 nuclear facility, its support systems, or its authorization basis documentation requirements or controls or the Site SAR?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety, Radiological Operations/ Engineering, Nuclear Safety, Engineering, Criticality Engineering, Environmental, Fire Protection Engineering, Safeguards & Security. Includes physical or structural impacts from construction or modifications; utility or support system impacts, such as domestic water, fire water, steam, or electric power; alarms; or analytical impacts from unanalyzed scenarios, such as external events involving the operation of aircraft, trains, or tankers near the nuclear facility. Includes facility radioactive and hazardous material inventory limits, site engineered controls [i.e.: utilities, site systems, propane tank restrictions, pressure relief devices, etc.], site transportation controls, wooden waste box storage controls and safety management programs. Hazard Categories. The consequences of unmitigated releases of radioactive and/or hazardous material **SHALL** be evaluated and classified by the following hazard categories: • Hazard Category 2: The hazard analysis shows the potential for significant on-site consequences • Hazard Category 3: The hazard analysis shows the potential for only significant localized consequences
36) Any ergonomic hazards?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety i.e., does the activity involve a combination of the following: working in awkward postures, repetitive motion, and/or the use of force to complete the task. Ergonomics is the field of study that seeks to fit the job to the person, rather than the person to the job. This is achieved by the evaluation and design of workplaces, environments, jobs, tasks, equipment and processes in relationship to human capabilities and interactions in the workplace. An ergonomic hazard is a physical state of the work environment which is incompatible with the physical or psychological capabilities and limitation of people and which may cause injury to employees. Ergonomic hazards include but are not limited to: • Repetitive motion of body parts required to perform work • Excessive force applied and required to perform work • Awkward body postures required to perform work
37) Work with NEW processes, equipment, or tools?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Health & Safety, Radiological Operations/ Engineering, Engineering, Training Are there any new processes, equipment or tools being used to perform the work?
38) Affect any other programs or areas not previously identified?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: SME support as required by the activity
39) Were any of the questions above answered yes that require environmental or waste operations involvement?
SME SUPPORT REQUIRED FOR THE PLANNING PROCESS: Environmental If any of the previous questions were answered yes that require environmental or waste operations support, the Environmental Manager will determine if an Environmental Checklist or Environmental Evaluation is required and prepare it as necessary in accordance with Implementation of NEPA Documentation, 1-25000-EPR-NEPA.001
BLOCK D SUMMARY: Sum of the total number of questions answered yes in BLOCK D:
40) Is the Sum of all YES answers in Block D **0 - 5**?
If the sum of the yes' is from 0 to 5, the score is 4.
41) Is the Sum of all YES answers in Block D **6 -10**?
If the sum of the yes' is from 6 to 10, the score is 8.
42) Is the Sum of all YES answers in Block D **≥ 11**?
If the sum of the yes' is greater than 11, the score is 14.
43) Will the work activity be performed in a Hazard Category 2/3 nuclear facility (defined in the Site SAR, Vol. 1, Ch. 4)?
If performed in a Hazard Category 2/3 nuclear facility which has an AB, the score is 4.
44) Is this work activity authorized to be performed by the existing authorization basis (AB) documentation (Nuclear facility ABs or the Site SAR) or regulatory permits/authorizations?
If not covered by an existing AB document the score is 4.
45) Is there a potential for this work activity to have an undesirable impact on, or in a Hazard Category 2/3 nuclear facility, its support systems, its authorization basis documentation requirements or controls or environmental impact?
If the activity may have an undesirable impact on the facility, support system, or it's AB requirements, the score is 2.

APPENDIX 2.3 - ACTIVITY SCREENING FORM GUIDE

46) Is there a potential for this work activity to have an undesirable impact on a Site SAR requirement or control (see Appendix 2.4)?
If outside a nuclear facility authorization basis, perform the checklist to determine if the activity is exempt from having a nuclear safety screen performed for this activity. If it is exempt, there is no undesirable impact on a Site SAR requirement or control. If not, there is potential and the score is 2.
47) Has an analysis of the potential hazards of this work activity or other uncertainties been completed, including the identification of required controls, and has it been documented to support the safety basis or authorization basis for this work activity?
Have the hazards been analyzed, documented, and approved such as a Safety Analysis Report, Basis for Interim Operations, Basis for Operations, Unreviewed Safety Question Determination, Integrated Hazard Analysis, Job Hazard Analysis, etc. If the analysis has not been performed, the score is 4.
48) Can the combined effect of the hazards potentially create additional hazards (For example, incompatible chemicals, synergistic impacts)?
The activity and hazards need to be looked at in total to determine if there are any combined hazards. If so, the score is 4.
49) Can the combined effect of the hazards cause a potential conflict in the controls (For example, Radiological Work Permit requires glovebag for containment and criticality limits restrict how much liquid can accumulate in glovebag)?
The activity and hazard controls need to be evaluated as a whole to determine if the hazard controls may conflict and need resolution prior to performing the work. If they can then the score is 4.
EXPERIENCE
50) Have the majority of the personnel (project manager, planners, workers, safety professionals, support staff, etc.) proposed to perform this work activity previously performed **ALL** of this work activity at the Site or any other site within the past 36 months?
If all of the work has not been performed by the majority of the people within the last 3 years, then the score is 4.
51) Have the majority of the personnel (project manager, planners, workers, safety professionals, support staff, etc.) proposed to perform this work activity previously performed **PORTIONS** of this work activity at the Site or any other site within the past 36 months?
If portions of the work has not been performed by the majority of the people within the last 3 years, then the score is 8.
52) How many major tasks/activities are involved in this work activity (For example, install tap, drain tank, disposition liquid, install electrical distribution, site excavation, etc.)?
Low Complexity < 5 tasks, if so the score is 0 points. Medium Complexity 6 – 9 tasks, if so the score is 1 point. High Complexity > 10 tasks, if so the score is 2 points.
53) How many people are involved in actually performing this work activity (includes support people on scene at any given time or shift, does not include oversight)?
Low Complexity < 10 people, if so the score is 0 points. Medium Complexity 11 – 24 people, if so the score is 1 point. High Complexity > 25 people, if so the score is 2 points.
54) How many functional organizations provide support during the performance of this work activity (For example, process specialists, RCTs, IH, FI, NS, CRIT)?
Low Complexity < 4 organizations, if so the score is 0 points. Medium Complexity 5 – 9 organizations, if so the score is 1 point. High Complexity > 10 organizations, if so the score is 2 points.
55) How many subcontractors are directly involved in actually performing this work activity?
Low Complexity < 3 subcontractors, if so the score is 0 points. Medium Complexity 4 – 7 subcontractors, if so the score is 2 points. High Complexity > 8 subcontractors, if so the score is 4 points.
SCORING
Add the total scores from lines 40 through 55 Check the Appropriate Box:
If The Total Score is **0 to 15**, the level of planning required is **LOW.** If The Total Score is **16 to 40**, the level of planning required is **MEDIUM.** If The Total Score is **41 or greater**, the level of planning required is **HIGH.** If the total score is between 35 and 45, the RM **SHALL** obtain confirmation of the selected level from another RM. From this confirmation, the RM has the option to revise the selection. The RM has the final responsibility for selection of the work planning process; however, senior management may elect to upgrade the level of planning at their discretion.

APPENDIX 2.4 - SITE SAR SCREENING FORM EXCLUSION FROM THE SES/USQD PROCESS

Work Control Number:_____ Originator:_____
Work Package Title:_____

This process is only for activities that are performed outside the Authorization Basis of a nuclear facility. If all of the following questions are checked NO, then, in accordance with USQD-RFP-99.1446-FEP, the activity does not require an SES/USQD review. Contact Nuclear Safety if you have any questions regarding completion of this form.

#	QUESTION	YES	NO
1.	Does the activity involve any portion of the Protection, Alarm, and Communication System, including LS/DW, Unity, Fire & Security Alarms, Central Alarm Station, Secondary Alarm Station, Fire Dispatch Center, Emergency Operations Center, Criticality Alarms or any supporting feature?		
2.	Does the activity involve any portion of the Site Propane System?		
3.	Does the activity involve transportation of nuclear or hazardous materials?		
4.	Does the activity inhibit emergency response capability?		
5.	Does the activity involve any portion of the following:		
	a) Site Domestic Water Supply System? The function and performance criteria for the Domestic Water System is the capability to provide fire suppression water upon demand for the length of time credited in the respective AB(s) and FHA(s).		
	b) Site Standby Power System serving Central Alarm Station, Emergency Operations Center, and Fire Dispatch Center?		
	c) Site Electric Power Systems?		
	d) Site Nitrogen Supply System?		
	e) Site Steam and Condensate System?		
	f) Site Natural Gas Systems?		

If only Question 5 is checked YES, then the activity does not require an SES/USQD review IF the following statement appears in the IWCP package *with a signature by a responsible design engineer (this **may** be in the prerequisites)*: "*This work activity does not change the function or performance of the system during or after the work activity.*"

Refer to USQD-RFP-99.1446-FEP, page 18, for definition of terms and discussion of function and performance requirements.

Check the applicable box:

- ☐ All no; Site SAR SES/USQD review not required.
- ☐ Question 5 is yes, but the WP contains the engineer's statement and signature, then a Site SAR USQD review is not required.
- ☐ Any question 1-4 answered yes or question 5 answered yes without the engineer's statement and signature, then a Site SAR SES/USQD review is required.

Responsible Manager (Name/Signature/Date)_____

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